Better Equipment for Southern Mills

Commerce

SOUTHERN TEXTILE BULLETIN

VOLUME 26 CHARLOTTE, N. C., THURSDAY, MAY 15, 1924. NUMBER 11

Any Disposition To Let Well Enough Alone Is a Dangerous Policy

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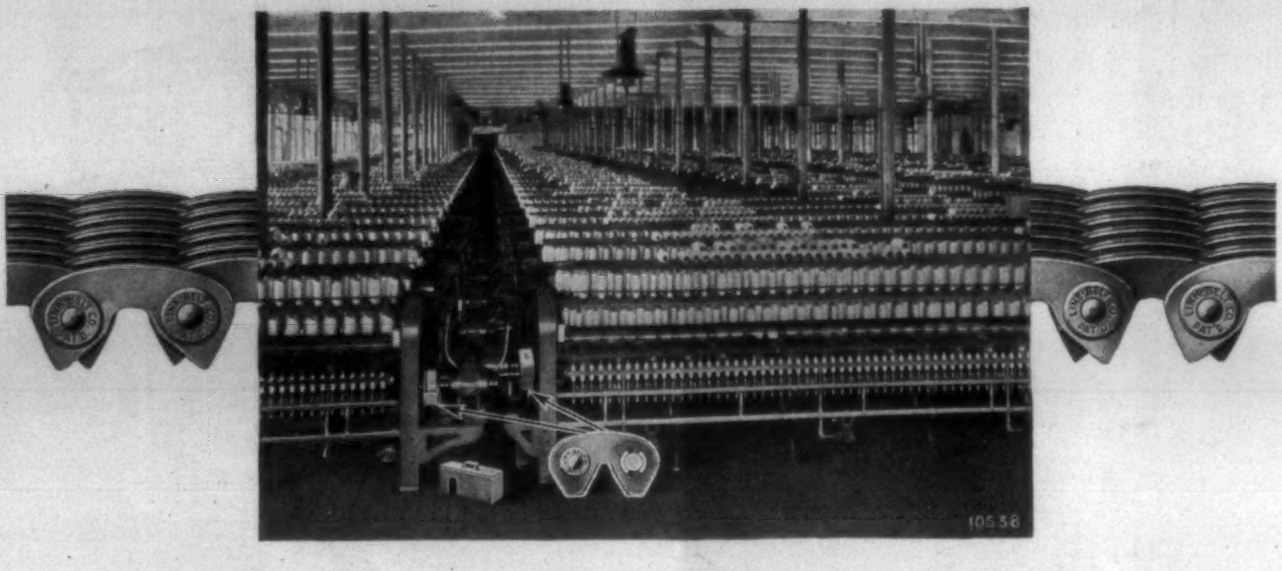

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Reports testifying to the economies effected by Link-Belt Silent Chain have been received from many textile mills. These reports tell of actual experiences with Silent Chain as power transmission. Data Book No. 125 tells how to figure drives and determine costs. Send for a copy. Also Book No. 425, "Link-Belt Silent Chain Drives for Textile Machinery."

1325

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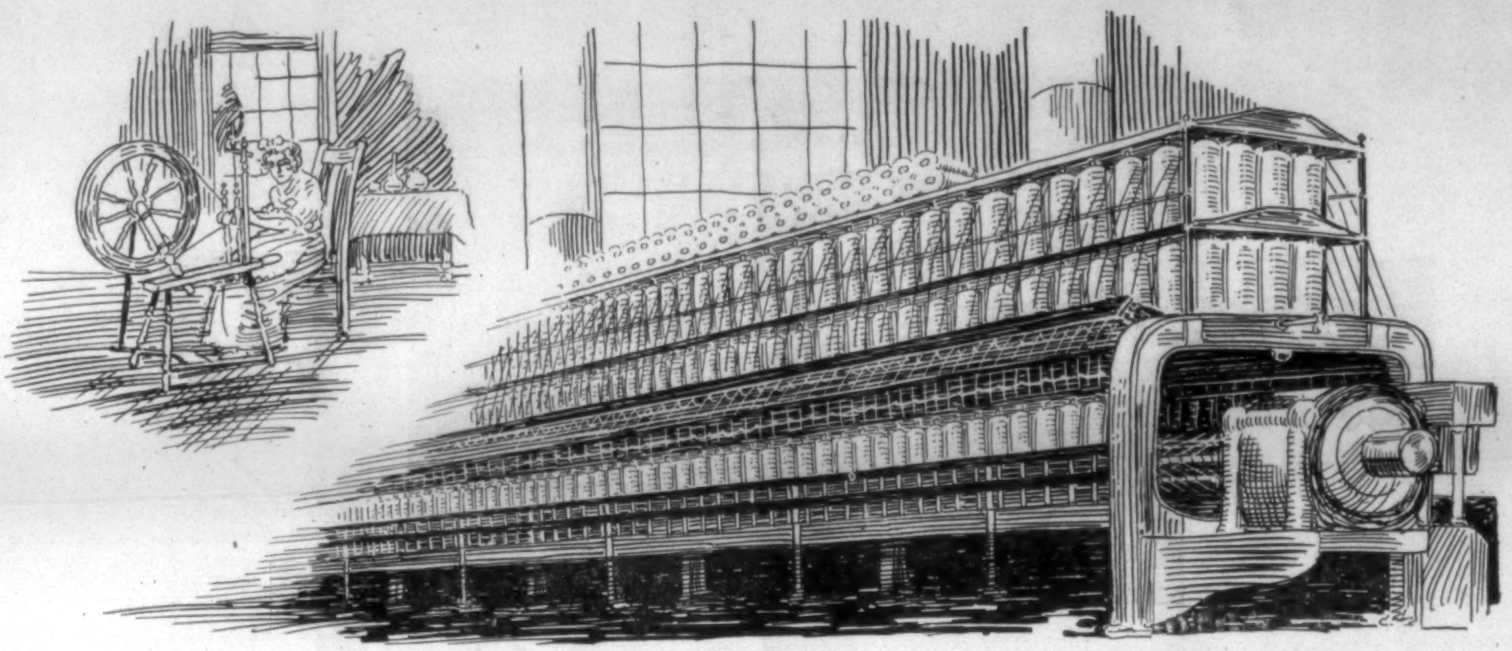

We've Marched Too Far To Mark Time Now

A MARCHING regiment is a thing of fascinating rhythmic force—a dynamic mass that moves forward with seeming implacable power, thrilling the onlooker with the impressiveness of organized motion.

But let that regiment stop—mark time! Shoulders droop, muscles relax—springy feet become shuffling feet. That which was a vast, resistless machine becomes merely a group of listless individuals in khaki.

Now let the bugle speak, Forward! and see that regiment sweep again into erect, vimful action.

The South, through its progressive adoption of improvements in textile machinery, is swinging ahead of other and older textile manufacturing sections, and is destined to gain—and hold—supreme leadership in the production of quality textiles. For years we marched ahead and KEPT AHEAD—NOW WE'RE MARKING TIME!

As the power riveter replaces a score of hammers so the modern spinning frame replaces a host of old spinning wheels. But in some sections tradition and antiquated machinery and mill practices have dwarfed both production and quality, **a condition the South must fend against.**

We Must Keep The South Leading In Big Scale Production of Quality Textiles

If we become like foolish misers now, gloating over the present situation, we will fall behind in the race. New men with new strength and new weapons of competition will march out of the dawn to give us combat. They will neither ask nor give quarter.

The present production lull is temporary—Cash In On It. Rigorously examine your machinery NOW. Throw out the antiquated units—put in brainier machinery—the kind that leavens slow profits and reduces overhead and operative discontent.

Machinery manufacturers will give you terms NOW that you'll likely not get again. And service without stint. NOW is the best time to get your mill machinery in apple-pie order, and keyed up to a greater-than-ever quality and capacity. Installations can be made now at greatly reduced prices. Look to it—NOW.

Better Equipment Campaign

This advertisement contributed to by the following firms:

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SOUTHERN
TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 39-41 S. CHURCH STREET, CHARLOTTE, N. C. SUBSCRIPTION $2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MAR. 3, 1879.

VOLUME 26 CHARLOTTE, N. C., THURSDAY, MAY 15, 1924. NUMBER 11

Greater Earnings From New Equipment

(By J. T. Wardlaw)

THE mill that, for a number of years, has made no expenditure for new machinery or equipment cannot hope to compete with up-to-date and well equipped plants. It may earn good dividends in prosperous times; it may break even under average conditions; but in periods of strict competition it will surely lose and must eventually encounter financial difficulties.

Where progress is lacking the owners apparently believe that the machinery and processes for manufacturing cotton goods are standardized and fully established, and that a mill once set up and balanced for a particular product should continue to make that product at the same rate and equal in quantity and quality with other plants.

This idea is entirely false. The cotton textile industry has made many advances in recent years, it is making advances at this time, and all indications point to still greater changes and improvements in the near future. The mill that ignores these facts is simply shutting its eyes to the light of progress and is dropping farther and farther behind in earning capacity as compared with its more progressive competitors.

Everyone recognizes the need for setting aside each year out of gross earnings a sum to cover plant depreciation. Many, however, do not make this sum large enough to include replacements which are needed to keep the plant at its highest earning capacity. Replacements and repairs should not only maintain a plant's efficiency, but actually increase its producing power because of improved type of equipment. A successful plant must not only hold its pace but must increase it, if necessary, to keep in step with newer mills.

Plant depreciation is primarily of two kinds, as follows:

1. Natural wear and tear.
2. Obsolescence.

The former has to do with the physical condition of the machine or equipment; the latter relates to the producing power of the machine as compared with the newest and best machines on the market. Obsolescence is a big factor in our mill equipment and must not be overlooked.

If there were no changes and improvements in textile machinery and processes, if everyone were content with existing machinery, if no new inventions were being made, no new ideas introduced—in other words, if the type and detail of our machinery remained the same—then our problem would be that of mechanical efficiency alone; it would mean the keeping of the machine in the best possible condition, new repair parts when needed, thorough overhauling from time to time, and finally, when its condition would not warrant further repairs, the replacing of the machine by a new one of same type, the gain being the difference between a new and old machine.

Synoptical Outline For "Better Equipment" Campaign

Which began May 1, 1924, in Southern Textile Bulletin

1st Week was institutional in character and designed to show the great advantage of modern machinery and methods over old style or primitive forms of machinery.

2nd Week—Was similar in character to first, but different in details.

3rd Week—(This issue)—Similar in character to first, but different in details.

OTHER SUBJECTS TO BE TREATED ARE:

4th Week—Improved opening machinery.

5th Week—Light carding, advantage of additional cards. Combing

6th Week—Damage to cotton by old drawing frames.

7th Week—Tape drive spinning frames as compared with old frames.

8th Week—Filling wind on warp.

9th Week—Spooling, warping and winding.

10th Week—Automatic looms,and loom equipment.

11th Week—Anti-friction bearings for power saving.

12th Week—Air conditioning and regulation of humidity.

13th Week—Direct, chain or group drive.

14th Week—Dyeing or finishing machinery.

15th Week—Special attachments and equipment.

This method will take care of depreciation from wear and tear, but it will not keep a mill up to modern standards, for development in the textile industry is constantly going forward. Men of brains, experience and inventive ability are thinking in terms of better machines, more production and similar processes. The natural result is that much of our machinery has become obsolete, and while it may be in fair, or even good, mechanical condition it cannot compete with the new equipment. And this applies not only to actual textile machinery but equally so to auxiliary equipment, arrangement and grouping of machinery, handling of stock between processes, the application of power to the machines, good lighting, ventilation and air moistening and many other factors of that kind.

Many of our mills have old machinery which if judged on the basis of mechanical condition alone, would be found wanting and should be replaced with new equipment. Couple this deficiency with that of obsolescence and the still greater need for replacement is evident. The cleaning trunk gives away to the vertical opener; the spinning frame with small cylinder and band driven spindles is being replaced by the frame with tape drive; the plain loom withdraws in favor of the automatic; electric drive comes in with its many savings and advantages; our improved standards of lighting are putting the old system out of business—and so on with the hundreds of improvements that have been and are being developed.

It is interesting to note that with improved machinery there is a strong tendency toward fewer processes. This is particularly true in connection with opening and picking equipment and to some extent in the other departments. This means saving in labor, floor space and plant investment. The chief results attained by better machinery, equipment, etc., are, a better product, greater production per unit and lower labor costs. Each installation must be judged on this basis.

While the replacement of old equipment with new is advisable in a great many instances, it would not be good business nor a wise expenditure of capital to make a scrap heap of all of our old machinery. Such a policy could not be justified and is not advised. Each case must be judged upon its merits and such improvements introduced as would be warranted after considering the expenditure involved and the returns which will result.

It is fact, however, that a great many mills have failed on account of being unprogressive and not keeping their equipment up-to-date, and, on the other hand, comparatively few mills have failed because of excessive plant expenditures.

Plant improvements are beneficial in many ways. The introduction of new equipment may bring about the rearrangement of machinery, a better grouping of processes, a simplier and cheaper way of handling the stock, building changes of advantage, improved power arrangements, better speeds, a general overhauling and tuning up, with stimulating effect for the whole plant:

Many mill owners will ask: Can we afford to spend the money for new equipment? The counter question may be more important: Can you afford not to spend the money for equipment necessary to bring your plant up to the competing and earning basis of other mills? There is real economy in money wisely expended for needed replacements.

Drafting Rollers in Card and Spinning Rooms

ONE of the peculiarities of cotton spinning is the difference in the diameters of the drawing or drafting rollers used in the various processes and for the different classes of cotton. In a general sense, these differences arose as cotton spinning developed, and they became, to a certain extent, fixed so far as each mill or machine maker was concerned. A practical element that also contributed to the permanency of these variations of diameter was the design of the gearing and the use of certain wheels. Mills and machine makers alike found a certain advantage in having variations, partly because of the human failing in having something different to others, partly because it added some difficulty or inconvenience to those desirous of copying, and further there was a great advantage in the fact that a mill would be confined in its repairs, replacements and extensions to some particular firm in order to avoid complications.

Table A.—Diameters of Bottom Rollers.

<table>
<tr><th rowspan="2">Machine.</th><th colspan="12">Indian Cotton.</th><th colspan="12">American Cotton.</th><th colspan="12">Egyptian Cotton.</th></tr>
<tr><th colspan="4">Front.</th><th colspan="4">Mid.</th><th colspan="4">Back.</th><th colspan="4">Front.</th><th colspan="4">Mid.</th><th colspan="4">Back.</th><th colspan="4">Front.</th><th colspan="4">Mid.</th><th colspan="4">Back.</th></tr>
<tr><td>Slubbing Frame</td><td colspan="4">1 1-16 to 1⅛</td><td colspan="4">15-16 to ⅞</td><td colspan="4">1 1-16 to 1⅛</td><td colspan="4">1⅛ to 1¼</td><td colspan="4">1</td><td colspan="4">1⅛ to 1¼</td><td colspan="4">1¼ to 1⅜</td><td colspan="4">1⅛ to 1¼</td><td colspan="4">1¼ to 1⅜</td></tr>
<tr><td>Intermediate Frame</td><td colspan="4">1 1-16 to 1⅛</td><td colspan="4">⅞ to 15-16</td><td colspan="4">1 1-16 to 1⅛</td><td colspan="4">1⅛ to 1¼</td><td colspan="4">1</td><td colspan="4">1⅛</td><td colspan="4">1¼ to 1⅜</td><td colspan="4">1⅛ to 1¼</td><td colspan="4">1¼ to 1⅜</td></tr>
<tr><td>Roving Frame</td><td colspan="4">1</td><td colspan="4">⅞</td><td colspan="4">1</td><td colspan="4">1 1-16 to 1⅛</td><td colspan="4">⅞</td><td colspan="4">1 1-16 to 1⅛</td><td colspan="4">1¼</td><td colspan="4">1⅛</td><td colspan="4">1¼</td></tr>
<tr><td>Jack Frame</td><td colspan="4">--</td><td colspan="4">--</td><td colspan="4">--</td><td colspan="4">--</td><td colspan="4">--</td><td colspan="4">--</td><td colspan="4">1¼</td><td colspan="4">1⅛</td><td colspan="4">1¼</td></tr>
<tr><td>S. A. Mule</td><td colspan="4">⅞</td><td colspan="4">¾</td><td colspan="4">⅞</td><td colspan="4">1</td><td colspan="4">¾</td><td colspan="4">1</td><td colspan="4">1 1-16</td><td colspan="4">⅞</td><td colspan="4">1 1-16</td></tr>
<tr><td>Ring Frame</td><td colspan="4">⅞</td><td colspan="4">¾</td><td colspan="4">⅞</td><td colspan="4">1</td><td colspan="4">¾</td><td colspan="4">1</td><td colspan="4">1 1-16</td><td colspan="4">⅞</td><td colspan="4">1 1-16</td></tr>
<tr><td>Draw Frame</td><td colspan="3">1st
1⅛</td><td colspan="3">2nd
1</td><td colspan="3">3rd
1⅛</td><td colspan="3">4th
1⅛</td><td colspan="3">1st
1¼</td><td colspan="3">2nd
1⅛</td><td colspan="3">3rd
1¼</td><td colspan="3">4th
1¼</td><td colspan="3">1st
1½</td><td colspan="3">2nd
1¼</td><td colspan="3">3rd
1½</td><td colspan="3">4th
1½</td></tr>
</table>

These practical factors, no doubt excellent in their way at the time, at last settled down into a species of cast iron rules. Students are taught a long list of varying diameters of rollers as necessary for the card room and spinning processes and for different cottons. Our mill authorities and machine makers adhere to the tradition, and mills are built for spinning Indian, American and Egyptian cottons, the planning of which are based on these varying diameters.

The practical factor which dictated the size of roller was undoubtedly the length of the cotton fibre. The diameters had to be of suitable dimensions to permit the front and middle rollers to be set to suit the length of the fibres. A consequence of this is that Indian cotton with its short staple is worked through small rollers, whilst Egyptian cotton, with its longer fibres, permits larger diameters of rollers, and throughout the world this idea is put into practice. The idea, however, is carried a step further for, by some process of reasoning that is somewhat difficult to understand, the sequence of diminishing rollers as the fibres become longer is carried out in the sequence of machines used for any given class of cotton, for instance, the line of rollers in the roving frame is almost invariably smaller than the slubbing frame for any given class of cotton.

Table A will give a general view of the differences pointed out above. The orthodox practical man will see nothing wrong in this table of diameters, simply because he has been brought up on them and he has found them to work all right in the mill. Some may prefer the larger diameters given in the table, whilst others will have a preference for the smaller sizes. In either case equal results are obtained, and no one need trouble to consider either one or the other the best arrangement, though the smaller sizes are the modern tendency on account of getting 1-16 in. shorter nip distance between front and middle roller.

Now, whilst one acknowledges that the diameters are quite in order and satisfactory work is obtained from them, they still afford a considerable amount of interesting thought. Some thought might be given as to why the diameters differ for different cottons and for different machines. This of course was answered generations ago, and is still answered in the same way, viz.: To enable settings to be obtained for different lengths of staple. If that is the correct answer, how does it happen that the same rollers used for the close settings of Indian cotton are not used for Egyptian cotton? If rollers are strong enough, can be set close enough and can be run at suitable speeds for Indian cotton, why are they not used for Egyptian cotton or any other cotton? The weighting of the rollers can have nothing to do with the matter, for the smaller rollers have the heaviest weights on them, as can be seen from the Table B, as adopted by one of the machine makers. The speed or revolutions of the rollers are also no help to us in solving the problem, for in every case it is the surface speed that is of importance, and the revolutions to give the surface speed is merely a question of gearing.

The torsion in the rollers would appear to be of no importance, for the smaller rollers for Indian cotton exhibit no torsional effects, although they are more heavily weighted than the larger rollers used for Egyptian cotton. In this connection, the length of the rollers, where torsional effects might be shown on small diameter weighted rollers, we find such effects absent, even in such long lengths as the S.A. mule.

Table B.—Fly Frame Weighting.

Machine.	Cotton.	Front.	Middle.	Back.
		Lb.	Lb.	
Slubber	Indian and American	18	24	Saddle and Bridle.
"	Egyptian and Sea Island	16	20	" " "
"	" " " "	14	12	Self-weighted.
Intermediate	Indian and American	16	20	Saddle and Bridle.
"	Egyptian and Sea Island	14	18	" " "
"	" " " "	12	10	Self-weighted.
Roving	Indian and American	18	24	Saddle and Bridle.
Roving and Jack	Egyptian and Sea Island	16	20	" " "
Roving	" " " "	10	Self-weighted.	Self-weighted.
Jack	" " " "	8	"	"

Outside a few hair splitting arguments, it would scarcely seem to be a rational method to have this diversified system of varying diameters of rollers, and it bears every evidence of a foolish adherence to tradition that could very easily be eliminated from cotton spinning. We clog our memory with useless facts in regard to these diameters, and think because our fathers and grandfathers had them we must stick to them.

So far as the diameters of the rollers are concerned, why cannot we have a standardized system throughout the mill which could be used for every kind of cotton? Imagine the foolishness of equipping a modern mill with a set of rollers for Egyptian cotton and so cutting out any possibility of transferring to, say, Indian cotton if one wishes to do so. In the equipment of an Indian mill, a little foresight in the arrangement of the details for setting the rollers, etc., would permit American or Egyptian cotton to be worked. The whole thing is a cheap and easily arranged engineering problem.

It will, of course, be a practical impossibility to standardize the rollers in existing mills, but in all new mills and extensions some effort should be made to do so, and in the design of the most suitable diameters the tendency should be towards small rollers, especially the second or middle roller. The roller stands should all be arranged to permit a reasonable degree of setting and a much better method designed than the present tongued and grooved sliding bearings on the stand.

A further improvement in rollers would be for our mill authorities to insist on much better material being used for the rollers. The use of good steel and its case hardening can be made an economical job in the hands of firms who care to step out of the groove of using the soft stuff and old-fashioned methods of case hardening so frequently found and so surely indicated in the dents and scratches made by pickers, etc.

It will be noted that there is an element of destructive criticism in the foregoing notes and as such will, no doubt, meet with the reception usually given to that form of criticism. The artificial and superficial props used to bolster up our knowledge of fundamental factors in cotton spinning ought to be knocked down and our minds cleared from the accumulation of unnecessary facts and ofttimes foolish adherence to traditional methods. How simple it would be to be able to answer the question what diameters of rollers should be used for Indian and Egyptian cotton by saying, for instance, ⅞ in., ⅝ in., ⅞ in., and another ⅞ in. for draw frames. This or something like it will come.

A feature connected with rollers is the fluting of the bottom rollers. The leather used in the mills to cover top rollers is a big item of expense, and the bulk of it due to wrong fluting and fluting on wrong metal. Mills have to have what is given to them, so the fluting problem is an engineering one and one that ought to be taken seriously in hand.

Another element associated with our drafting rollers is that of weighting. In most mills this weighting factor is not bothered about at all, the machinist puts certain weights on and there is the end of it. But ought it to be? Has the weighting of rollers and the mechanical arrangements for weighting no influence on the cotton passing through the rollers? It is no exaggeration to say that weighting is of enormous importance, and yet at the same time few mills have their rollers correctly weighted. Drafting of the rollers and setting are both to be associated with the weighting, and only by the use of suitable sized rollers, correct setting and weighting can a machine be made to draft and deliver a regular sliver or roving. No drawing rollers in any mill does it at present.—Textile Recorder.

Selling to the Orient

Sales of United States merchandise to Orient are showing remarkable gains especially when compared with those of other parts of the world. Exports from the United States to Asia and Oceania in the 8 months ending with February 1924, the latest available record, show an incease of about 44% over the same period of last year, while those to the remainder of the world show a gain of but about 7% in the like period. The share which exports to Aisia and Oceania form of the total exports for the 8 months ending with February 1924 is17.1% against 13.4% in the same period of last year, 12.7% in the calendar year 1920, 9.8% in the closing year of the war, and 7.9% in the year immediately preceding the war. The total value of the exports to Asia and Oceania in the fiscal year ending with June 30, 1924, seems likely to exceed $700,000,000, as against slightly less than $200,000,000 in the fiscal year 1914, all of which preceded the opening of the war. In the eight months ending with February the total to Asia and Oceania is $512,000,000 against only $356,000,000 in the same month of last year.

This big gain in our exports to the Orient, says the Trade Record of the National City Bank of New York, is the more interesting by reason of the fact that manufactures form a very large percentage of our exports to that part of the world. In the latest year for which exact details on this point are available manufactures formed over 75% of our exports to Asia and Oceania, and the big gains in our 1924 sales to that section of the world indicates that manufactures are holding their own in the post-war competition with those produced in the other parts of the manufacturing world.

Color Chart

Colors have taken a considerable jump, according to the weekly report of the Gotham Hosiery Shops, having gained in percentage sold more than 10 per cent. Eighty-one per cent of colors were sold as against 19 per cent of blacks.

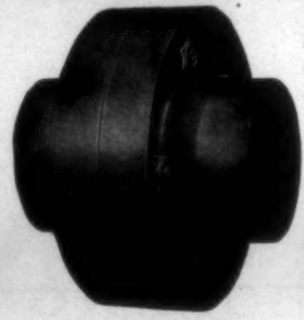
Gravel has now arrived at third place, having made a steady gain in the last three weeks. Skyn and black continue to lead in numbers sold in the sheer lines, while black and buck reign in the regulars.

According to the report, the following colors were sold in the sheer lines: skyn, black, gravel, buck, shell graphite, sunset, caramel, medium gray, piping rock, reindeer, gun metal, silver, nu, sahara, acorn, white, eastor, peach, dark brown, bobolink, gold, poudre blue, suede and otter.

In the regular lines, the following colors were sold: black, buck, medium gray, skyn, white, dark brown, gravel, piping rock, caramel, reindeer, medium brown, suede, gun metal, bobolink, shell, acorn, sunset, nu, castor, peach, otter, silver, graphite, navy and gold.

Chinese Demand New Design in Printed Goods

The cut of Chinese clothig changes but little from year to year, but designs and color changes are taking place in increasing frequency, particularly in printed goods for the better classes. Merchants must keep abreast of these changes, and in order to do so, Trade Commissioner G. C. Howard reports,

PULLEYS HANGERS
The T. B. WOOD SONS CO. Line
CLUTCHES COUPLINGS
FLANGE OR PLATE COUPLINGS

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QUALITY AND SERVICE SINCE 1866

Recent Textile Research

By George B. Haven, Massachusetts Institute of Technology, Cambridge, Mass., before National Association of Cotton Manufacturers.

THE rapid advance of industrial development in this country in the last three or four decades has been the combined result of three important factors: first, an abundant and certain volume of raw materials; second, a labor supply which, though full of social and economic difficulties, is still of unquestioned skill and variety; and third, effective and scientific manufacturing processes. It is with the latter that this paper has chiefly to do.

The successful manufacture of any great commodity, whether it be textiles, machines, or food, must be carried out along the lines of sound and direct principles. Haphazard methods and circuitous routes between the raw material and the finished product are things of the past. The problem of every manufacturer is to transform the raw material as directly, accurately and economically into the finished article.

In processes as complicated and numerous as are those involved in textiles, it is natural that questions will arise in very great numbers which must be answered accurately and finally before new methods and more direct processes can be successfully adopted.

We must never lose sight of the fact that the greatest research laboratory of all is the manufactory itself, whether it be the mill, shop, or other industrial plant. Many questions arise which can never be correctly answered unless carried out upon a scale and under the practical conditions which the mill alone can afford. This is especially true of interrelated processes where the mill as a whole must prove or disprove the answer to its own questions.

On the other hand, there are numerous research problems which can be carried out more successfully with the refinement and exactness of a laboratory than otherwise. The microscope will often show at a glance chemical and mechanical properties which it would cost a large amount of time and money to determine otherwise. Such research questions are relatively small in number, but their correct solution is of very great commercial importance. Such questions can frequently be best answered by taking them out of the manufacturing process and isolating them under exact conditions in the laboratory.

In this direction the Institute of Technology has sought, especially during the last eight or ten years, to answer numerous research questions, in no way seeking to supplant the mill or the textile school in their own field.

Among the numerous studies made in textiles recently the six following ones are chosen as typical:

1. Moisture surveys.
2. Rate of moisture regain in various fabrics.
3. Measurements of fabric porosity in felts and ducks.
4. Measurement of crimp and take-up in weaving processes.
5. The development of a constant load-rate textile testing machine.
6. Abrasion and Flexure in fabrics.

1. The part which moisture plays in textile manufacture, especially in cotton, is no longer a question but an assured fact. For accurate size in yarns, satisfactory and economical manufacturing conditions and the resultant uniformity of product, atmospheric conditions in a textile mill must very generally be artificially maintained by automatic appliances for this purpose. Very many mills thus controlled have found convincing results in the qualities above mentioned. The accurate determination of the amount of moisture present at various stages in manufacturing processes requires the use of an automatic electric oven and refined balances for weighing. The institute has made numerous of these tests for private individuals, returning a plot with full detail of the exact moisture condition of the product. The samples for such determinations must be small, viz., within the capacity of fine balances, and must be sent from the mill to the laboratory hermetically sealed. It is not possible to get results of any value if the samples are sent through the mail, even though carefully wrapped in waxed paper. The best way is to take a sample of about two ounces in weight from each important process in cotton manufacture, uniformly distributed between the cotton bale and the cloth room. These should be immediately sealed, either in glass capsules or press-top tin containers. They may then be sent without undue haste to the laboratory and of course must be weighed, container and all, just as received. The accuracy should be to the nearest hundredth of a grain, in order to secure three significant figures in the percentage results. After subtracting the tare weight of the container, the moist cotton is carefully transferred to the basket of a textile oven and, after drying three or four hours at a temperature of 220 to 230 degrees Fahrenheit, the bone-dry weight is determined. Subtracting this from the moist weight will of course give the amount of water present. The term "regain" has been officially defined as the percentage which this water indicates relative to the bone-dry weight. The term "moisture content" is used to indicate the percentage of moisture in terms of the actual or natural condition. It is evident that the latter percentage varies with the chance condition at time of the test, while the regain is based on a constant value, namely, that of the dry product.

In many processes, due to the manipulation of the fiber, the moisture which may have existed in the bale or may have been artificially added in the form of an emulsion, is rapidly dissipated. Frequently, therefore, yarns and finished fabrics are nowhere nearly in their supposed condition regarding moisture. Many hundreds of such tests have been carried out at the institute.

2. Rate of moisture regain. The necessity of conditioning fabrics and yarns prior to tests for strength or weight is no longer doubted. The question therefore arises as to how long it is necessary to hang fabric specimens or yarn skeins in standard atmospheric conditions before they will arrive at substantial equilibrium. It is a well known fact that gauzes and light cotton fabrics will pick up their fill of moisture in half or three-quarters of an hour and remain uniform thereafter. Tire fabrics and heavy belting ducks, however, require much longer intervals of time to come to balance regarding moisture. The question has very often been asked of the institute, "What is the least interval of time in which I can reasonably expect my peculiar fabric to come to condition?" To solve this, a study has been recently made of the definite rate at which a wide variety of fabrics pick up moisture, starting from a bone-dry state. This of course gives the maximum amount of time under the most adverse conditions that would ever be necessary to condition a fabric. An instrument, known as a "regain scale" was constructed in such a manner as to read directly the percentage of regain in the fabric at intervals of time determined upon a stop watch. Plots were constructed in terms of the elapsed time and the regain for a variety of fabrics and yarns, ranging from very light to those of medium weight. The plots illustrated the fact that in light fabrics almost all the regained moisture is collected in the first twenty minutes or half hour of exposure and that one hour is a sufficient interval for any average fabric to attain its final weight.

3. Measurement of porosity in felts and ducks. The openness or closeness of texture in many mechanical fabrics is of considerible importance. This is especially true of felts, filter cloths, sail duck, and wing rabrics. A good sail duck, for instance, should be strong, light in weight and as impervious to air as possible. A felt or filter cloth, on the other hand, should have for its purpose a definite amount of porosity. In the case of some fabrics the medium of filtration is water instead of air. It is very difficult to carry out experiments in water porosity upon finished goods because of the harm done to the finish itself by the passage of water through the fabric. About two years ago a long series of experiments was performed by Messrs. Wilson and Taylor, of the institute research staff, showing that, at least for heavy felts, air and water porosity were in very direct proportion. The advantage of using air instead of water is of course that the finished fabric could be thus tested without injury. To this end a machine for measuring the air porosity of paper maker's wool felts was recently designed, constructed and delivered to one of the research contracting concerns at the institute. It consists of a heavy U-shaped frame, carrying in its lower member a high pressure pneumatic clamp. On top of the machine is mounted an electrically driven blower, giving a range of air pressure from zero to six pounds. A vertical air tube carried on trunnion axes is supported by the upper frame directly over the pneumatic clamp. In the air tube is an orifice plate with a U tube attached in such a manner as to give the pressure drop across the orifice. The pressure which builds up upon the back of the fabric when clamped in the machine is indicated on an inclined gauge and recorded by means of a Bristol recording gauge. Since at low pressure the amount of air passing through an orifice is in very approximate proportion to the pressure drop through the orifice, a determined volume of air may be forced through each fabric of a series, the back pressure then being a measure of the relative porosities. This machine has been installed about one month and, we understand, is giving very satisfactory results to the owners. We are at present extending, by means of special apparatus, the principle of this machine to the determination of sail-duck porosity and other fabrics.

5. Measurements of crimp and take-up in weaving processes. Some seven years ago E. D. Walen, at that time chief of the Textile Division, Bureau of Standards, Washington, D. C., proposed a method and piece of apparatus whereby the deviation of yarns from a straight line as they rest in the fabric could be measured. It consisted of a rigid standard at the top of which was a small clamp for holding the upper end of the crimped yarn. To the lower end was attached a light scale pan in which a progression of weights could be placed. A measuring scale behind the yarn and a light vernier attached directly to the yarn made it possible to read elongations in hundredths of an inch. Of course the object of such an instrument is to determine the amount of weight necessary to straighten the yarn but not to stretch it. If a yarn thus marked off while resting in the fabric is, say, 8 inches long, after removing the crimp the length might be 9 inches. The inch thus obtained from straightening the yarn divided by the original fabric length of the yarn would indicate the crimp as 12½ per cent. It is perfectly evident that most mechanical fabrics, exclusive of belting possibly, should be "square," namely, in order to resist rupture from an external force the threads in the warp and filling should share equally in resistance. Such a condition can only be obtained when the fabric is "square," i. e., the deviation from straightness in the warp and filling threads is equal. If a plot is carried on with the determination in the Bureau of Standards apparatus, a curve, growing gradually steeper and finally merging into a straight line, will indicate the behavior of the crimped yarn. Such a plot is usually made with the scale weights as a

(Continued on Page 30)

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TEXTILE SALESMEN

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(National Aniline & Chemical Co.)

Will H. Willard, of the National Aniline & Chemical Co., is a cotton manufacturer who acquired such knowledge of dyeing problems that his services were secured by dyestuff manufacturers.

W. H. WILLARD.

He was born at Norfolk, Va., September 16, 1869, and attended the Maryland A. & M. College.

His first cotton mill experience was at 16 years of age at the Orange Factory, Willardville, N. C. Later he filled the position of assistant superintendent of the Commonwealth Mills, Durham, N. C., and at both of these plants manufactured colored goods.

He then entered the hosiery manufacturing business and at different times managed hosiery mills at Cheraw, S. C., Norfolk, Va., Tryon, N. C., and Winston-Salem, N. C.

He entered the dyestuff business with the Casella Color Company, with headquarters at Greensboro, N. C., and when they were absorbed by the National Aniline & Chemical Co. became assistant Southern manager.

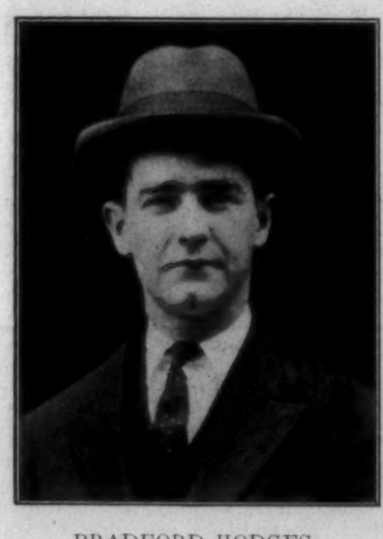
Later he was promoted to Southern manager, with headquarters at Charlotte, and has satisfactorily filled that position.

In addition to being a successful salesman, Will Willard has a personality that makes friends and he is very highly regarded throughout the textile industry of the South.

BRADFORD HODGES.

(Chicago Belting Co.)

Bradford Hodges is the manager of the Atlanta Direct Factory Branch of the Chicago Belting Company at 37 Trinity Ave., Atlanta, Ga., and has charge of the Chicago Belting Company sales in Virginia, North Carolina, South Carolina, Florida, Georgia and part of Alabama.



BRADFORD HODGES.

Mr. Hodges is a Georgia boy and was educated at the University of Georgia. For a number of years he was with the Bibb Manufacturing Company and was their purchasing agent for quite some time. He has been in the leather belting business eight years—with Alexander until that company had a change in its management—and since then with the Chicago Belting Company, which is one of the largest and most progressive of the belt manufacturers.

He has sold belting all through the Middle West and South and specializes in the textile and saw mill trades.

Bradford Hodges is a young man, but 32 years of age, and already has acquired a very wide circle of friends and acquaintances who respect his judgment and recognize him as an authority on leather belting.

Clark's Directory of Southern Textile Mills
Contains Complete data relative to Southern Mills
Pocket Size Revised Twice Yearly
CLARK PUBLISHING CO.
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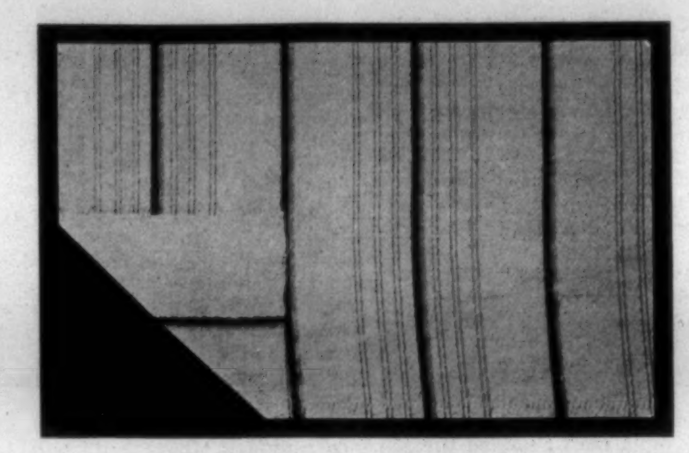
Imported Cotton Cloths

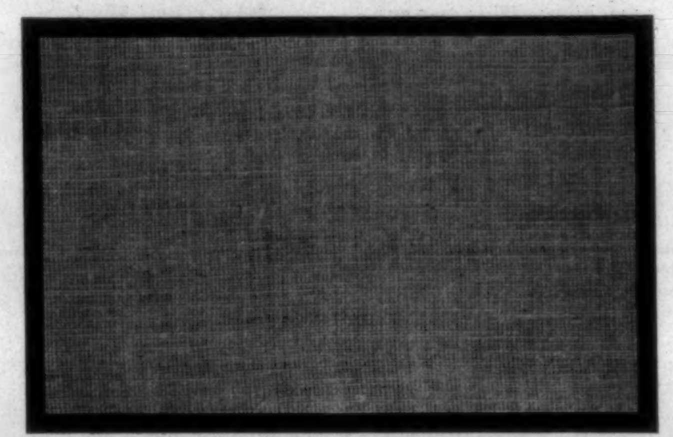
From Survey of United States Tariff Commission.



Sample No. 13.—Sleeve Lining.

Warp sateen (5-harness). Finished width, 39 inches.
160 ends and 84 picks per square inch, finished.
Warp yarn, 57s. Filling yarn, 47s.
Weight, 4.47 linear yards (4.84 square yards) per pound, finished.

Piece-dyed, mercerized, and printed.



Sample No. 14.—Embroidery Muslin.

Plain woven, with center selvage for splitting. Grey width, 53 inches.
83 ends and 65 picks per square inch, in the grey.
Warp yarn, 54s. Filling yarn, 66s.
Weight, 5.89 linear yards (8.67 square yards) per pound, in grey.

Unbleached.

Sample No. 15.—Venetian Lining.

Warp sateen (8-harness). Finished width, 32 inches.
172 ends and 74 picks per square inch, finished.
Warp yarn, 80/2. Filling yarn, 26s.
Weight, 3.42 linear yards (3.04 square yards) per pound, finished.

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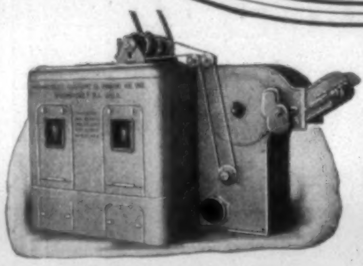

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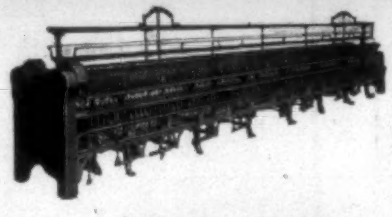

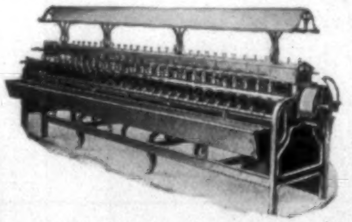

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How a Master Mechanic Increased Mill Profits

From "Cotton Chats," Published by the Draper Corporation.

"BECAUSE I had an inquiring mind for new methods, studied costs and hunted ways to reduce them."

Thus spoke the agent of a successful textile plant who had started as a Master Mechanic. He had be asked how he, without textile school education or practical experience as carder, spinner or weaver, had outdistanced the men with these advantages.

The remark gave promise of a good story. The questioner proved an interested and helpful listener.

"As a young man I landed the job as master mechanic of this mill. It had a well-equiped machine shop, and I felt that my life's ambition had been attained

"My orders, like those to hundreds of master mechanics before and since, were to make all possible supplies and repair parts for the producing machines. This was supposed to save the profit on making them and reduce outside bills which appeared so large to the treasurer.

"Soon after taking charge, my attention was attracted to the time wasted by high priced mechanics in waiting on loomfixers who had the run of the shop.

"I built a supply room with a bin for each and every part we caried, put a clerk in charge and separated this room entirely from the machine shop. The fixers dealt only with the supply clerk, receive immediate service or were told we did not have the part; and in a few months we had our stock so arranged and completed that we were seldom without the part wanted

"With my machinists on the job all the time, we found we could dispense with services of two of of them.

"The supply clerk soon reported that he was over-stocked on pieces for which there was only a limited annual demand and on other parts for which he could find no use.

"Investigation showed that when a machinist needed work, the foreman looked over our stock of patterns, found one on which the supply of castings was low and gave out a job to make up a quantity.

"I instructed the shop to work only on orders from the millwrights and men making our general repairs, or from the supply clerk, who was to carry only such stock as protected us from having machines stopped for repair parts.

Discovers His Handicaps.

"A long-standing cause of friction between our shop and the overseers was the claim of the latter that our castings did not quite fit their machines. I had good pattern-makers and machinists and was sure I could duplicate the parts on any machine in the mill.

"Determined to make good, I studied the weave room troubles with the overseer, seeking to put myself in his place and get his viewpoint. The experience was an eye-opener.

"I didn't give up, however. I visited your plant to find some way to duplicate your castings. I saw how badly I was handicapped.

"I did not have the original drawings to work from. I must use hand patterns, with their inaccuracies in moulding, where you used machines and match-plates. Your foundry worked from a fixed iron formula while our local foundry was not careful in this respect. Your inspectors had the accumulated knowledge of years and ingenious gauges that enabled them to discover defects that men with less knowledge of the particular needs of an automatic loom would pass.

"In short, I discovered that I was not producing repair parts that gave the same results on the looms as the parts made by you. Further, I did not see any possibility of doing so.

Nearly Lost His Job.

"That discovery came near being my Waterloo. I had the enthusiasm of youth, intense loyalty to the mill and an uneasy conscience.

"Once started, I was determined to see the end. I found we had made patterns on which we could never get our money back. We were charging parts to the supply room at the cost per pound of the rough castings. Figuring the finishing as fill-in work for our mechanics, we were taking no account of defective castings we could not use, of those spoiled in our own shop or of tools ruined in working castings that were too hard. I found these losses wiped out our imagined savings on most of the repairs we were making.

"Then I went to the superintendent. I told him I could rdeuce the annual cost of maintenance of our machines and increase production if allowed to purchase from the machine builders a considerable part of our repairs. I had the figures all worked out. In losses saved and gains made possible they totalled in the thousands and looked very imposing to me.

"For my pains, I heard much about the folly of theories and some uncomplimentary personal remarks. Finally I was told that the treasurer never complained about foundry or machine shop bills, but would raise ructions if called upon to approve a monthly grist of bills for repairs.

"A year later, under a new superintendent, I was given a free hand. I worked with the overseers of the different departments, and in a short time we showed remarkable savings, got an increased product and had a feeling of co-operation and good will among the machine tenders of the mill.

"When that superintendent became agent, he made me his superintendent. On his death, I became agent.

(Continued on Page 29)

Social Workers Conclude Meeting

DISAGREEMENT as to the form the development the Southern textile industry should take in the future marked the closing day of the sixth annual conference of the Southern Social Service Association, in session in Columbia, S. C., for three days last week.

A clear cut issue of profiting by the history of the textile industry in England and in New England, or of continuing to develop along the lines found profitable in the South without particular regard to the history of the industry in other sections, was brought out at the sessions. The first viewpoint was supported by Broadus Mitchell, associate in economy, Johns Hopkins University, in the second part of the address on "As Others See Us," which address was delivered at the morning session of the association; the second viewpoint, that of the South's dealing with its textile problem in its own way, was supported by M. W. Heiss, president of the association, in an address at the Pacific Community Association dinner Saturday night.

Dr. Mitchell discussed the old and the new type of Southern cotton manufacturer, with "no sharp line of division between them," but yet "substantial differences." The present mill operator "is an industrialist," the Johns Hopkins professor said, "recognizes his peculiar employer's interest and has certain purposes which are at variance with the well being of the community.

He went on to say that the old autonomy was threatened by the voice of society in the form of labor legislation and by the protect of the workers, who "want self-government rather than good government." The speaker then attacked the stand of the typical Southern manufacturer and argued for Federal abolition of child labor, collective bargaining and the disappearance of the company town.

"The typical Southern cotton manufacturer has met proposed legislation with ignorant and selfish objection on specious and unworthy grounds," Dr. Mitchell said. "He has met attempted collective bargaining with dissembling 'industrial democracy,' or, oftener, with the tyranny of the company owned town. In these new individualist policies he has, nevertheless, much of the old social sanction. When he opposes, for example, the constitutional child labor amendment, he mingles the bleat of the sheep with the growl of the wolf.

"Northern mills are coming South. Some day the disabilities that are already apparent in New England will be communicated to Yorkshire and Lancashire. If one may hazard an economic forecast, the South is going to be the great seat of cotton manufacturing in the world. It is the duty of everybody with a social conscience to see to it that what have been sectional assets do not become liabilities. The workers of the South must be profited—not exploited. We must celebrate our old idealism—not deny it.

"If we can argue anything from history, it must be that we shall have abolton of child labor by national authority, collective bargaining with operators represented by persons of their own choosing and the disappearance of the company town, in favor of self-determining citizenship.

"The Southern cotton manufacturer and his welfare staff have now to choose whether they will oppose the inevitable or foresee and welcome it."

At decided variance with the view expressed by Dr. Mitchell was the attitude assumed by the association president in his after dinner address. While acknowledging that much help might be brought to Southern workers by workers from other sections brought into the midst of Southern delegates, Mr. Heiss said that the worker coming into the South looked at the problems differently "from our social workers and manufacturers." He pleaded for "the other side" of the question.

"It is known that we in the South freed a certain type of whites from a certain kind of bondage," the president asserted, "we knowingly came into the industry and we intend to continue to develop along the lines best suited us. It was said we broke economic and social rules, that we broke every law in economics and they were surprised that we survived. We are now again willing to work out for ourselves, against their standards, a better type of mill industry and of mill village."

Mr. Heiss went on to say that "while we were proud of our national government but that in governing local conditions we must continue to regulate by State rather than national legislation," and that the labor question of the States were different and should be confined to the State.

"The pendulum is swinging our way," he said, in concluding, and declared that Southerners must prepare to meet their problems in a true and understanding light and looking toward the future "rather than following the dictates of history."

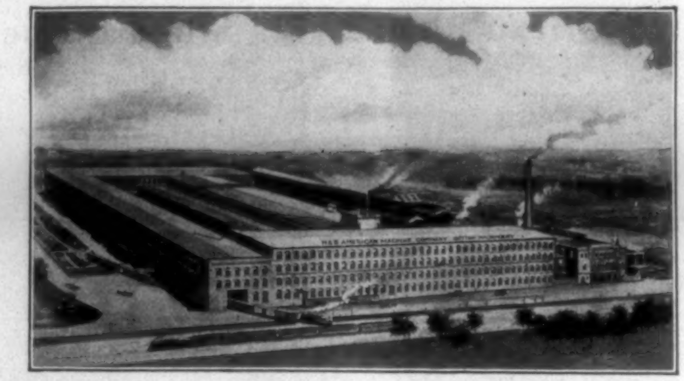
Resolutions adopted at the business session of the association provide for the placing the association on a "live, all the year round" basis. Working toward this end, the association was divided into five zones, the centers of which are Greensboro, Charlotte, Columbia, Greenville and Atlanta. Zone meetings are to be held twice annually.

The resolutions called also for the employing of a part time corresponding secretary, a better basis of raising funds from the mills and a closer tie between the Southern Association and the American Cotton Manufacturers' Association. The new plan of finance was suggested according to the plans of that association. Details of the new plans were left with the executive committee.

Mr. Heiss, superintendent of the Revolution Mills at Greensboro, was

(Continued on Page 25)

COTTON
MACHINERY



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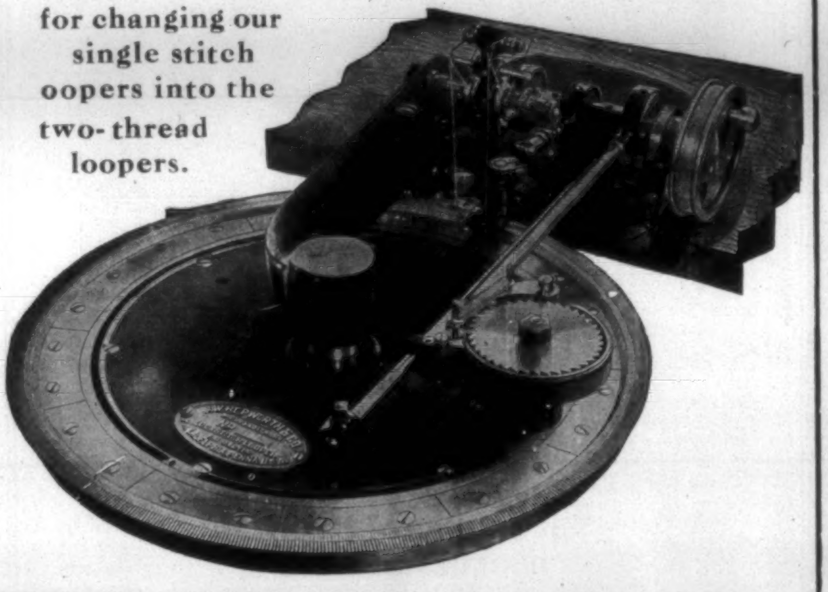

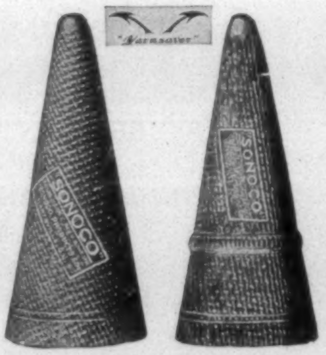

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Knit Goods

Dyeing Knitted Fabrics

THE dyeing of yarns for use in the manufacture of knitted fabrics has to be conducted on principles varying in some respects from the fixed principles used in dyeing yarns for the manufacture of woven cloth. For instance, it does not materially affect the woven fabric if a light degree of felting has been started in the yarn during the dyeing. In the dyeing of yarns for either hand or machine knitting every effort must be taken to prevent any tendency to felting. Overheating, an excess of pressure too long sustained, or any action likely to cause felting in the yarns will make it difficult to produce soft, light, fluffy knitwear. Finished knitting yarns are usually given a second scouring before dyeing in order to prevent the possibility of irregularities in the shades. That is, after the yarns have been scoured in the regular way in the scouring department, the dyer puts them through another washing operation in his own department to assure himself that all substances which are liable to cause unevenness in dyeing are removed. These second scours are regulated so as to run them off the yarn freely for any residue of scouring material will have a tendency to cause streaky places in the finer grades of yarn. If fine woolen yarns are being prepared for dyeing, thorough rinsing is necessary to remove any oily substances which have been used in the preparation of the yarns.

The type of dyeing macnine used in a hosiery mill depends on the character of the goods manufactured and at which stage the material is to be dyed. The material may be dyed in the cotton or the wool, in the yarn, in the fabric or in the garment. The paddle style of dyeing machine is often used for dyeing hosiery goods, consisting of a circular vat in which the goods are placed. The bath and the goods are kept in constant motion by the rotating action of the paddles of the wheel which is operated in bearings above the vat. The continuous dyeing machines are used for coloring knitted fabrics, while knit goods which require coloring with the sulphur dyes are put through a specially designed machine. The sulphur dyes are for cotton goods, while mixed wool and cotton goods are commonly colored with the direct dyestuffs. The acid dyes are used on some of the goods and require no mordant. Mordanting with potassium bichromate with a reducing ingredient is practiced on hosiery goods which have been dyed with logwood. The chrome-mordant dyes are useful in making heather mixtures.

The wool is boiled one hour in a bath of three per cent bichromate of soda and three per cent cream of tartar. After rinsing the wool it is ready to be dyed.

Color Theory.

In the dye house of the knit goods mill the color theory plan is usually arranged under the headings of primary colors, secondary colors and tertiary colors. A primary color is one which cannot be separated into parts, but may be reduced to a tint by white or to a shade by black. By mixing either of the two primary colors we get a compound or a secondary color.

The secondary colors are composed of two primaries. For example, red and yellow when mixed produce orange. Red and blue produce purple. Blue and yellow produce green and so on. The tertiary colors are made up of two secondary colors. Orange and green produce a citron shade, green and purple an olive and orange and purple a russet.

Complementary colors are the shades which if placed together in a design tend to increase the intensity of their respective colors. If red and green are together in a check or stripe in a knitted garment both colors will be increased beyond their actual color value. Any two colors that harmonize well will produce the same result if placed side by side in a texture, for the colors reflect the rays of the primary colors of which they are composed. Green will develop red rays and red green rays, so that when these two colors are together the result is the development of both colors. But if two greens or two reds are similarly arranged they will tend to detract from each other and thereby lessen the value of the color effect. The tertiary colors are used mostly for ground work in knitted textures and the secondary and primary colors for brightening up and making the designs appear richer in color and volume. Still, in the average knit garment, the brighter the color, the more sparingly it should be used, except for some of the elaborately patterned sporting goods.

The various colorings for knitted goods are commonly worked out in the designing room of the hosiery mill, although some dyers attend to this matter themselves, while occasionally the expert analyist of a large buying concern prepares the dye recipe and sends it along with the order for the goods. Even then there are frequent changes needed in order to get the best results. A red may have to be brightened, an olive toned down, or a pink shaded lighter or darker.

In many cases the shades selected by the firm ordered the goods are such that few of the straight dyes will suffice and the mill dyer must match the color as near as possible by compounding.

One mill received an order for sporting garments in which a number of oriental shades were used. Such colors are always difficult to match for the reason that the weav-

(Continued on Page 27)

Much Interest in Coming Convention

TEXTILE manufacturers throughout the country will follow with extreme interest developments at the 28th annual convention of the American Cotton Manufacturers Associa- that is to be held in Atlantic City, N. J., May 27-28. The comprehensive plans already announced for a consideration of the present state of the trade industry with possible measures for alleviation is focusing attention on this meeting. Increasing importations which has resulted in curtailed operations by domestic mills is bringing the problem of the tariff close home to American manufacturers and if anything constructive can be done at this time it will be an event of outstanding importance. The American Cotton Manufacturers' Association is the great national organization of textile mills, which embraces in its membership approximately 90 per cent of all southern plants and is the recognized spokesman of this rapidly developing section. Between 800 and 900 of the foremost cotton manufacturers of the country will be present at this meeting.

Additional interest centers in this convention by reason of the plans for relief of the Southern industry from dependence on outside agencies, which will be further elaborated at this meeting. The goal towards which the Association has been working for years is an independent and self contained industry in the south, with its own dyeing, bleaching, finishing and mercerizing plants, thereby obviating the necessity of shipping its goods North and East for further processing, and the manufacture of such fabrics as will more directly enter the channels of consumption. The building of textile machinery and repair parts in the South is also one of the goals towards which the association is working and already substantial progress has been achieved. A dozen or more big finishing mills, piece goods bleacheries, and mercerizing plants have been initiated within the past two years and numerous plants have taken steps in the direction of the production of diversified products, all in line with the action of this association at its Washington and Richmond meetings. Several leading textile machinery corporations are now giving attention to the building of machinery plants in the South, this branch of the industry furnishing the demand for more than three-fourths of all the new textile machinery being erected in this country. And coincident with this expansion has gone the effort to establish closer and more intimate contact with the agencies for distribution, to the end that the merchandising problems can best be brought home to the manufacturers for the advantage of all concerned.

This meeting will serve also to focus attention upon the altogether remarkable development of the Southern textile industry within recent years. There are today more than 16,850,000 spindles in the South with 325,000 looms and 43,808 knitting machines as compared with 542,000 spindles and 11,898 looms in 1880, a gain of 16,318,000 spindles and 313,000 looms in the 44 years In 1880 there was only $17,000,000 invested in the 161 cotton mills of the South, giving employment to 16,741 operatives and producing $16,356,598 worth of goods. Today approximately $1,000,000,000 is invested in the 1,181 mills in the South, giving employment to almost 225,000 operatives and producing goods valued at more than $1,000,000 annually. No other of the older major industries can show such an amazing record of growth. Forty-four years ago the South was just beginning to emerge from the reconstruction period following the great War Between the States. Agriculture had been its traditional industry. Cities and towns were small and widely scattered, poverty was general, transportation facilities limited, capital scarce and timid, population scant and knowledge of the arts of industry and commerce almost negligible. The section had just passed through a great war which had left the country almost bare. It was with this background that the leaders of the new Industrial South sought to build up a great industry and that too in competition with the established industry North, which enjoyed ample capital and credit, excellent transportation facilities, adequate trained labor, splendid trade connections and which furthermore was close to the centers of trade and distribution. The record of development of the Southern textile industry in the face of such handicaps is nothing short of marvelous. And at this approaching convention many of the pioneers who contributed so much to this progress will be in attendance, considering further plans for continued expansion.

A comprehensive and detailed analytic discussion of the present situation in the textile trade with its widespread curtailment among both Northern and Southern mills promises to be an outstanding feature of the approaching convention. Contributing causes that have resulted in the present deplorable state of the market, particularly touching increasing importations and the tariff situation will be reviewed and steps outlined whereby, it is hoped, alleviating measures may be formulated to the end that confidence may be restored and full employment resumed. Stuart W. Cramer, of Charlotte, N. C., one of the leading manufacturers of the South and an authority of widespread note on textile economics, will outline the situation and lead the discussion which will be participated in by a score or more of representative Southern manufacturers and others from various sections of the country. That the association, which embraces in its membership more than 90 per cent of all Southern mills, will take a definite stand on the subject is regarded as likely in view of the extent to which imported merchandise

(Continued on Page 25)

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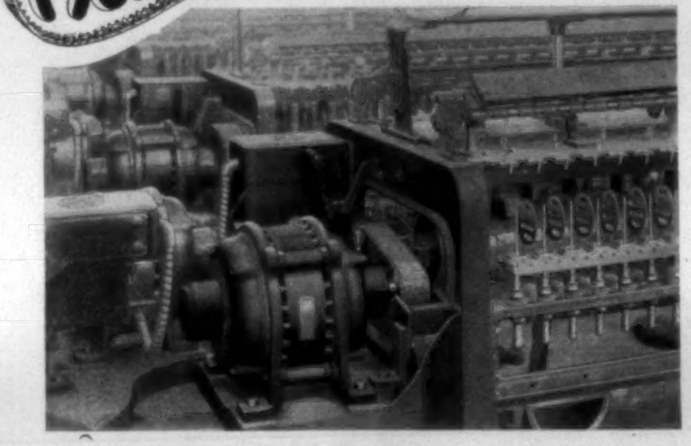

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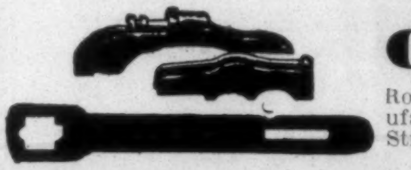

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Covering Top Rolls

By Mc. Sanders.

I NOTE with much interest in current issues of various textile papers the discussion at the recent meeting of the Spinners' Division of the Southern Textile Association. I am especially interested in the discussion of covered top rolls. This subject I think has been one of the most sadly neglected of any department in the mill, and yet I believe it to be the most important department in the successful manufacture of good cotton yarn. During my 12 years in and around the mill and with 13 years calling on mills of the South I have been interested in roll coverers' supplies and better roll covering. I have given this department special study for the past five years and during that time have made many experiments with various makes of skins and cloth.

Now, with reference to uneven rolls. We will probably have uneven rolls as long as we have to depend on using sheep skins and it seems now we will have to do this for a long time to come, as there has not as yet been discovered a substitute for sheep skins for top rolls which has worked satisfactorily. Sheep skins are grown and not manufactured, and by this I mean that the manufacturer of roller skins has to depend largely on nature for the quality of his product. Of course, through the process of manufacture the skin is made much more even in thickness and finish than in the raw or natural state, but with all the special machinery and expert workmanship it is almost impossible to get every skin of the same thickness. In fact, it is impractical to make one skin of the same thickness because the skin doesn't grow that way, and while of course it is possible to make it the same, yet in so doing there would be danger of injuring the quality of the skin if this should be resorted to. There is, however, room for improvement in getting a more uniform skin, and this should be accomplished by the close selection of raw skins by the manufacturer, because unless you have a uniform skin to start with you will certainly have an uneven skin in the finished product. Next to uniformity in thickness the most important factor is the grain surface. Sheep skins, as stated in the beginning, are grown, not manufactured, and brings us again up against nature, and it is very hard to change the natural texture of a sheep skin. Special care should be taken in the selection of raw stock for grain surface. This is quite largely controlled by the breed of sheep, the section where raised, etc. I note that one of your members states that at one time he secured uniform skins, but found it hard to do so now. I might say here that this condition has been brought about very largely due to the change in breed of sheep within the past few years. Sheep are usually grown for the fleece or wool they produce and not for the skin. Therefore, the growers have worked for a higher grade wool, in bringing out their breeds, and this new breed of sheep producing a long fine fleece produces a poorer skin than the old-time breed. This is very largely the reason for so much uneven and inferior roller leather today.

The average user of roller skins, I am confident, does not realize what a problem the manufacturer of roller leather is up against today. I have explained that we are not getting as good quality raw skins today as in the past. Even with the greatest care in selection on the part of the manufacturer they find it very hard to get enough raw skins suitable for first-class roller leather. It is necessary to buy and manufacture tremendous quantities of raw skins in order to get a selection suitable for roller work. These rejects, or the skins which are unsuitable for roller work, have to be manufactured and sold at a very low figure, but this is necessary in order to get the proper selection for rollers.

Don't think roller leather too high in price, and don't see how cheap you can buy it. Cheap roller leather is one of the greatest expense items you could add to your cost sheet. It may not show up in the supply bills, but it certainly will on your production and quality reports.

Adopt some good reliable manufacture of sheep skins, tell them what your requirements are, pay them a fair price for their product and then put it up to them to furnish you with a first-class skin. If you have your rolls covered by custom shops pay them a fair price for their work and demand first-class material and workmanship. They certainly cannot furnish this though at a price below the cost of first-class material. This will help solve your roller troubles more than you probably realize.

The tanning and finishing of roller skins, of course, is not to be overlooked as a secondary matter because this is quite essential to good roller skins. As stated in the beginning, nature plays the most important part, but without the proper handling and finishing of the skin it would be mighty hard to spin yarn with it. There are various makes of skins on the market but the standard and most satisfactory leather should first be carefully selected in the raw state, tanned by the slow process of Hemlock bark method and then properly finished. It is possible to tan sheep skins in a few hours and they look good, but you will find these skins will not work satisfactorily. To tan a skin properly for roller purposes takes from six to eight weeks, then it starts through the various stages of manufacture to the finished state. It has been the experience of leading manufacturers that they get the most satisfactory skin for roller purposes right here in this country.

This applies both to uniformity and quality of grain surface.

As to calipering rolls—this certainly would be time well spent by any mill, but more especially those on finer numbers. Of course, this should be done at all times on the front rolls of both roving and spinning frames. This is not of such great importance for the middle and back rolls but they should be of a fair degree uniform in diameter. If your roll coverer will take the time and exercise care in the selection of the most uniform skins for his front rolls and then make his cots double, I mean for single boss rolls or shells, and then pair the cots you will get a more uniform roll. The thickness of any skin varies. The most uniform part of the skin is the center or backbone. Cuts from this part of the skin ranging from four to six inches from either side of the backbone center should be uniform if the skin has been properly selected, and would suggest this part of the skin be used on all front rolls. This will necessitate extra care on the part of the roll coverer, but it will certainly eliminate a lot of uneven rolls and bad yarn for the spinner. The heavier part could be used on the middle and back rolls.

Felt or cushion: An uneven roll is not always due to an uneven skin. In fact, I venture to say that there is a greater variation in the thickness of the average roller cloth than in the average skin, which, of course, results in a variation in the diameter of the roll, no matter how even your cot or skin, if you put on an uneven cushion you still have an uneven roll. There are various fabrics on the market for roller cloth. I believe the most widely used in the South is a coarse cloth which is made from a cotton warp and shoddy filling. It is impossible to make a uniform piece of cloth like this. Tear a piece of this cloth apart and see if you think you could weave a uniform piece of goods with such filling. The only uniform cloth for cushion is one which has been woven of even woolen yarn made from first-class stock, then felted and brought down by methods of manufacture to a certain thickness. This higher grade felt has to go through various processes to make it compact and uniform in thickness and at the same time retain its natural cushion effect. This is done with special machinery and is a process of pounding the fabric in order to bring each fibre together as a solid fabric or cushion. It is stated that at one time this was done by hand, using small hammers, and I understand that in some parts of China they still use the old hand method of felting woolen fabrics.

As to using hot calendering for finished rolls—certainly believe this greatly increases the quality of the roll and every roller shop should be equipped with one of these machines and each roll calendered before using.

Keep rolls well cleaned, using care when oiling not to let oil come in contact with the covered roll—oil ruins leather. Keep top clearers in good condition.

Chicago Fuse Company Reorganized

The Chicago Fuse Manufacturing Company has announced a reorganization which includes the purchase by its president, W. W. Merrill, of the remaining block of stock held by A. D. Dana, of New York City, until recently chairman of the board, who has been inactive in the management of the company's affairs for a number of years. The capital stock has been changed from 7,500 shares of $100 par value to 60,000 shares of no par value. Thirty thousand shares were offered to the public through John Burnham & Co. and Hitchcock, Bard & Co., and all immediately taken. A considerable share of these 30,000 shares were purchased by Mr. Merrill and his associates, including employees of the company throughout the general office, sales department and factory. The active management of the company will remain the same as heretofore. W. W. Merrill and his associates own the controlling stock of the corporation and there will be no change in its policies or method.

In making this latest move, Mr. Merrill has taken his final step in his advancement from a minor employee in 1894 to president and controlling stockholder at the completion of his thirty years of activities with the Chicago Fuse Manufacturing Company, which is well known all over the country to all connected with the manufacture and distribution of electrical supplies.

The other officers of the company, all of whom have spent practically all of their business lives in its employ, include Geo. C. Reid, vice-president and treasurer; Walter D. Dana, vice-president, and F. Trautmann, secretary. E. J. Hamilton will continue as manager of sales.

New Du Pont Dye

Sulfogene Direct Blue BRS, a direct sulfur dyestuff of reddish navy blue shade, especially suitable for machine dyeing, has been developed and placed on the market by E. I. du Pont de Nemours & Co. It produces redder and brighter shades than Sulfogene Direct Blue B concentrated, and like it, does not require a period of oxidation immediately following dyeing to develop the fullest shades.

Sulfogene Direct Blue BRS is level dyeing and possesses the usual good fastness properties of other Sulfogene blues. It may be applied equally well on raw-stock or yarns but as it can be rinsed without subsequent oxidizing its use is advantageous when dyeing piece goods in a jig. Sulfogene Direct Blue BRS shows, it is stated, a good fastness to cross-dyeing, becoming only slightly redder, and is used for dyeing cotton warp yarns.

When aftertreated with copper, chrome and acetic acid the shade becomes redder and the fastness to light and washing is improved slightly.

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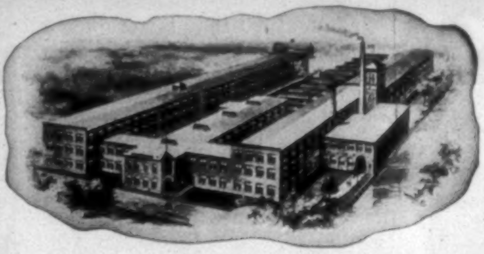

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Advantages of Better Mill Equipment

Articles Submitted in Prize Competition On This Subject.

Better Equipment Contest.

As a superintendent or an overseer, how often have you felt that if you were given an opportunity, you could replace your old equipment with modern machinery and methods and thereby make so much larger profits for your company that the initial expense would soon be lost sight of?

Or if you have been fortunate enough to be at a mill where the worn and out-of-date equipment had been replaced with the modern product of the machinery shops, you know by your own records how much your mill company has saved in labor, operating costs, and how much production has been increased at the lower figures.

Or if you have left an old mill where you had been struggling along to make the worn and antiquated machinery do its best and gone into a new plant that was the last word in mill construction, you have personal knowledge of the many advantages that the modern mill has over those where machinery has not been kept up-to-date.

If these experiences have been yours, or if you are convinced of changes you could make in your mill if the treasurer gave you a free hand, you have an excellent opportunity to cash in on your ideas.

The contest on "Advantages of Better Equipment" is still open and you still have time to enter your article.

We want the practical ideas of the practictal men and want no hesitate to enter the contest because they feel that they do not write well enough. We wil correct all errors in grammar and spelling.

No article received after May 20 will be considered in the contest.

Prizes for the contest winners will be awarded as follows:

For best article	$50
Second best	30
Third best	20
Next ten best	10

Contest Rules

1. Articles must not be longer than three full columns.

2. Articles must be signed with assumed names, but the real name and address of the writer must be known to us.

3. The subject, "Better Equipment for Southern Cotton Mills," will include anything that has a bearing upon the subject, but is intended to specifically cover the advantages to be derived from installing new and modern machinery. Special weight will be given to statistics or the results of experiences or tests.

4. Articles must be original and articles that include paragraphs or sections copied from other articles on this subject will be thrown out. The contestants and all of our readers will be requested to call our attention to any article that shows evidence of having been copied.

5. Articles will be published by us in the order received and the judges will be instructed that where two are of equal merit the decision shall be given to the one received first.

6. In mentioning carding, drawing, roving, spinning, spooling, twisting, warping, etc., machinery, the name of the builder of such machinery can not be given. This rule will not apply to special machinery.

7. No article that is received after May 20th will be considered in the contest and under Section 5 of these rules there is an advantage in mailing articles early.

8. The contest will be decided by seven practical men who, acting independently of each other, shall read the articles and give us their opinion relative to which is best and second best. A vote for first place will count (1) and a vote for second place will count (½).

9. The article receiving the largest number of the judges' votes will be declared the winner and its writer will receive $50.00. The writer of the article which receives the second largest vote will receive $30.00 and that of the third best, $20.00. The writers of the next ten articles will receive $10 each.

NOTE—It is intended that the articles shall show the advantages of better opening machinery, light carding, tape drive spinning, etc. with data relative to the increased production and the reduced cost of production.

Number Five

This subject means a great deal to the future progress of the Southern textile industry as to economy, quality and quantity. We will base this article on an equipment to manufacture 30s carded yarn. First, we want an opener room with floor space sufficient to allow our mixing to have at least 36 hours to age and assume its normal condition. This will allow our cotton to be in a loose condition and enable us to get the best results from a cleaning standpoint from our opener. Next, we want a modern vertical opener equipment with a condensing system that feeds the cotton from the condenser direct to the automatic feeder. The vertical opener so adjusted to supply a constant supply of cotton to the breaker picker. This insures us a lap from the breaker picker with uniform weight per yard and enables us to omit the intermediate picker and allows us to produce a finished lap of uniform weight per yard with less beater blows per inch on the cotton fiber and saves thousands of these little fibers that are often broken by excessive beater processes.

We want modern pickers and all fast running parts equipped with roller bearings. This insures smooth running and saves power and supplies. The feed apron on the finisher should be equipped with roller bearings and the sprocket chain drive. This will insure a positive drive with no slip.

We want our evener equipment with cork insulated cones to insure a positive drive, which means a great deal in producing a uniform lap in weight per yard.

We want the number of machines in our opening and picker department sufficient to handle the necessary amount of production with a modern speed for the best results—six to seven thousand pounds for sixty hours for each finisher and eight to nine thousand for each breaker picker. We are aware of the fact that a much greater production is often put through pickers, but the best results are desired and cannot be obtained if the equipment is so limited that it is necessary to crowd the pickers for excessive production. Too much care cannot be taken in the proper opening and picking equipment if we expect to produce quality and quantity on economical basis.

Now, we come to the card. We want a modern card equipped with roller bearings on cylinder and lickerin journals to insure smooth running and save power. They also eliminate vibration, which enables us to get very close settings. We want good clothing on our cylinder doffer and flats, good lickerins and good screens. With this and our cards properly ground and properly set, carding a light sliver of about 75 pounds for ten hours will give us high quality carding.

We want our cards equipped with a modern vacuum stripping equipment, which enables us to increase the production of the card and adds much to keeping the cards clean and does away with lots of dust in the room and enables one man to successfully operate a greater number of cards which reduces the cost per pound of the carding department.

Now, we come to the drawing frames. We cant these machines modernly equipped with metallic rolls, with a front roller speed not over 200 R. P. M. If we are forced to run an excessive speed on our drawing frames we cannot produce the desired results. With the work the drafting rollers are required to do and with the amount of stock the drafting rolls have to work on if

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Charlotte, N. C.

they are running at a high rate of speed they cannot produce an even and smooth sliver.

Now, we come to the fly frames. We want modern and up-to-date fly frames equipped with cork inserted cones. We want these machines equipped with ball bearing front top rollers. We want slubbers to have not less than 66 spindles, intermediates not less than 120 spindles, fine frames not less than 180 spindles. This is for 12"x6" slubbers with not over 3 draft, 10"x5" intermediates not over 4.75 draft, 7"x3½" fine frames not over 5.75 draft.

Now, we come to the spinning. We want a frame with 7⅞" ring not less than 252 spindles per frame; 3¾" gauge without separators; these frames equipped with metallic thread boards, which insures that guide wires will stay in their proper place much better than on the old common wood thread boards. We want frames equipped for filling wind which will give us practically 10 per cent more production than the warp wind. We want our frames equipped with individual motor drive, which insures almost a constant roller speed. This means a great deal, because with a variation in our speed we cannot adjust our frames so they will run good. Owing to the fact that different speeds call for a different traveler and other adjustments too numerous to mention, we want our frames equipped with tape driven spindles, which insures us of a positive spindle speed that if we did not get we would produce yarn with various twist, which is very undesirable. Then, too, with the band driven spindles the variation in spindle speed causes our spinning to run bad because the traveler does not fit the various speeds. We want our cylinder journals equipped with roller bearings. This insures smooth running and saves power. With this spinning equipment we can produce 100 per cent production of high quality yarn at low cost.

Now, we come to the spooler. We want a modern tape driven spooler equipped to spool filling wind, the filling wind spooling being greatly preferred over the warp wind for the reason the yarn does not undergo the strain with the filling wind that it does with the warp wind and the yarn retains the elasticity that adds very much to the value of the yarn in the succeeding processes. Also the waste is reduced to almost nothing if the doffing has the proper attention in the spinning room and the cost per pound for filling wind spooling, usually runs about the same as the cost for warp wind spooling.

"COTTON."

Number Six

Better equipment for Southern mills means the expenditure of more money, but this article is from experience at a Southern mill that had what some would term "pretty good old machinery," and was being operated night and day making some pretty good old yarn, getting an average of about 75 per cent production and the quality as good as was expected from an old mill, but the cost of operating was away up in the air. As the old saying, "Old men shall dream dreams, and young men shall see visions," in this case the old man saw visions and dreamed dreams of the old machinery scrapped and replaced with up-to-date equipment, and this is now a reality.

To begin with, we have space to mix seventy-five bales of cotton, which we find sufficient for ten thousand spindles, and we have found that this enables us to keep our numbers. We have also been convinced that the vertical opener raises at least one grade in cotton, and have found that ball bearings on beaters absolutely stopped our grid bars from getting gummed up with oil and grease, which enables the grid bars to do their duty and of course there is no way to tell how much we have saved in cotton by keeping black oil out of the work. Ball bearings on evener and apron rolls have saved us in power and labor by reducing set backs 80 per cent.

By installing Cook's vacuum card stripper we save $10 per week in labor, which enables us to cut speed on cards 10 per cent by cutting down time for stripping, by installing additional cards and cutting another 10 per cent which brought us down from one hundred pounds per card in ten hours to seventy-five pounds. Our breaking strength increased around 20 per cent, which of course was helped by the installation of ball bearings. After fighting the drawing to put through what stock the cards on licker-ins would do, we began paying by the hank, after which we found that we had more deliveries than we needed at present speed, so we reduced speed and still never have any trouble about keeping up. Our fly frames are the latest model frames, built in 1917, and don't have any trouble getting production and quality. Frame help comes from miles around to get a job and other mills with old frames pay more than we do.

We found with the wide guage spinning frames we can get more pounds of yarn from the same floor space, with less spindles than with narrow gauge. We found that it is less expensive to operate tape driven spindles than with band drive, both in labor and material. We also found that clutch spindles will make 90 per cent less waste or tangled bobbins than the plain, and that there was a 6 per cent increase in production after installing individual motors with chain drive, and that it is less expense to keep up chains than belts. Individual motors were installed three and one-half years ago, and we have spent only $2.50 for repair parts for chains, and still have most of the parts on hand, as it has not been necessary to use them. These frames have been operating night and day, which would be equivalent to seven years' service, and everything else in the mill, except cards and drawing, are running up

(Continued on Page 26

NON-FLUID OIL
BETTER LUBRICATION AT LESS COST PER MONTH

DO YOU WANT A
CLEAN PRODUCT—

Free from oil stains? Then use

TRADE MARK REGISTERED IN
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MODERN TEXTILE LUBRICANT

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Besides saving the product from oil stains—NON-FLUID OIL affords bearings constant protection from friction at less cost than liquid oil because each application lasts so much longer.

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SOUTHERN
TEXTILE BULLETIN
Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

Published Every Thursday by
CLARK PUBLISHING COMPANY
Offices: 39-41 S. Church St., Charlotte, N. C.

THURSDAY, MAY 15, 1924.

DAVID CLARK	Managing Editor
D. H. HILL, JR.	Associate Editor
JUNIUS M. SMITH	Business Manager

SUBSCRIPTION

One year, payable in advance	$2.00
Other Countries in Postal Union	4.00
Single Copies	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

ADVERTISING
Advertising rates furnished upon application.
Address all communications and make all drafts, checks and money orders payable to Clark Publishing Company, Charlotte, N. C.

We've Marched Too Far To Mark Time Now

WHEN D. A. Tompkins and R. M. Miller, Jr., built the Atherton Mills to make 30s yarn, New England laughed aloud and the head of a machinery house made a special trip to Charlotte to advise against any such foolish undertaking as attempting to manufacture as fine as 30s yarn in the South.

"You can make a fair quality of 8s and 16s and maybe 20s," said the New England cotton manufacturers, "but you have not the intelligence and your help are not capable of being trained to make 30s yarns and you can never make a quality that will sell."

In spite of their mirth at the first attempt to make 30s yarns, the Atherton Mills made them successfully, and the manager, R. M. Miller, Jr., before he retired from business, built and operated a mill which regularly made 80s and occasionally filled orders on 100s and 120s yarn and made them of a quality equal to the best in New England.

The feature advertisement, this week, in the "Better Equipment Campaign" is entitled "We Have Marched Too Far to Mark Time Now," and that statement is true.

From the field of 8s to 16s the manufacturers of the South have marched with firm step and steady ranks to the point where they are surrounded with the production of 70s and 80s interspersed with some 100s, and we must not mark time now.

Those who only a few years ago scoffed at the efforts of the South to make 30s have felt their foundation shake from the upward march of the Southern manufacturer and now from the hills of New England they are watching with alarm, the advance of the Southern army into the field of the finest and fanciest dress goods.

Some of the New England manufacturers are packing their machinery upon their backs and are joining the Southern manufacturing army.

They are welcome, but they would be more welcome if they brought with them new machinery and modern equipment and took their place with those who see the future of the South interwoven with the best of equipment and the most efficient methods of manufacture.

The cotton manufacturers of the South have marched too far and have accomplished too much to mark time now.

As the soldier who has marched far throws away his old shoes and dons new ones that will ease his feet in the march to come, so must the cotton manufacturers of the South junk the old equipment with which they have marched and replace it with machinery that will enable them to march with more ease and more efficiency in the journey to come.

We dream of the day when the South will stand forth as the greatest and most efficient cotton manufacturing section of the world and that day can not come except through the perfection of the textile equipment of the South.

High production with resultant low cost of production and high quality of output can only come from constantly replacing old and antiquated equipment with that which is modern and efficient.

We have marched too far to mark time now.

Coming Out Into the Open

IN a recent editorial the Wool and Cotton Reporter of Boston says:

> "Undeniably existing lack of uniformity in child labor laws puts certain States at a disadvantage. The Nation as a whole is vitally interested in the preservation and proper development of child life, and it would seem to be a fair proposition for the Federal Government to regulate child labor. Several attempts to attain this event by Congressional measures have been unsuccessful, due to the Supreme Court's opinion that they were unconstitutional. This is why the National House of Representatives has just passed a resolution calling for an amendment to the constitution, empowering Congress to limit, regulate and prohibit the labor of persons under 18 years of age, and without impairing the power of the several States except the extent necessary to give effect to legislation enacted by the Congress. It is to be hoped that the Senate will act favorably on the resolution, and that the State legislatures will promptly give the matter their consideration that the necessary three-fourths vote may be obtained for this important proposed amendment."

This is coming out into the open with the advocacy of a Federal Child Labor Law and with the admission that the law is designed to equalize supposed disadvantages of New England.

We do not blame any journal for fighting for the industries of its own section but it is silly to claim that New England is at a disadvantage because of the child labor laws of the South.

All of the New England States, even Massachusetts, permit the employment of children in factories after becoming 14 years of age.

South Carolina, Alabama, Tennessee and Virginia entirely prohibit the employment in factories of children under 14 years of age.

Georgia permitted 136 children of widowed mothers to work last year and North Carolina allowed 66 boys under 14 years of age to work outside of school term.

Perhaps the Wool and Cotton Reporters who so ardently advocate Federal legislation to remove the disadvantages of New England can tell us how seriously the competition of 136 children in Georgia and 66 part time workers in North Carolina affected the mills of New England.

It would be in keeping with the usual statements from New England to allege that the idleness of 4,000,000 spindles in New England is entirely due to the competition of the 202 children who worked in the South while under 14 years of age.

It would be very interesting to have the Wool and Cotton Reporter explain how lack of uniform child labor laws puts New England at a disadvantage.

Next Year's Cotton

WE advise the cotton mills of the South to purchase at least half of the cotton they will need from October, 1924, to July, 1925, should October again decline to approximately 24.50.

We know that it is difficult to buy ahead in the face of present discouragements, but the man who will study conditions ahead is the one who succeeds.

The present cotton crop is late and is therefore liable to much boll weevil damage.

There is little probability of a large crop with much greater probability of an inadequate crop.

Should there be a 13,000,000 bale crop there might be a temporary decline to 22 cents, but the ability of the South to hold would soon push prices back above the 25-cent mark.

Should anything happen to the present crop that would indicate a crop of 11,000,000 bales or less the price would quickly advance to above the 30-cent mark.

The present curtailment is rapidly bringing about a scarcity of cotton goods and will without question mean good business for the next season.

We are now reversing 1920, for then we overbought and overproduced, whereas this country is underbuying and the cotton manufacturing industry underproducing.

The mill that waits may get its next year's cotton for 22 cents but it is more likely to have to pay above 30 cents.

After studying conditions we consider it safer to purchase next season supply of cotton on the basis of 24.50 for October than to take chances upon the many things that may happen to a crop that has secured such an unfavorable start.

When Hand-to-Mouth Policy Will Cease

The eventual gradual absorption of available cotton goods will naturally measure the period at which the distributing merchants will have to abandon their present hand-to-mouth policy, or do without. In other words, merchants can now order a minimum quantity of goods for quick shipment for which manufacturers so far have been willing to compete one with the other and give the retailer the strangle hold. This unbalanced condition will naturally come to a crisis and finally result in a condition whereby the retailer can no longer get on short notice that which he requires, and in the course of a short while place the cotton manufacturer in control and naturally force the retailer to pay what the mill asks, provided the mill has the goods. Finally when the goods are not to be had the retailer will naturally resume his previous function as a merchant instead of operating on a basis of selling "on samples" rather than "out of stock." When the retail distributor wakes up to the fact that he has not been functioning as a merchant and finds himself compelled to make contracts for delivery months ahead the manufacturer will have the strangle hold and distributing merchants will be falling over each other to procure their supply of goods which naturally will result in the cotton manufacturers resuming a ravenous demand for raw cotton. It is therefore natural to assume that the result will be a complete reversal of present conditions as the manufacturers will cover their commitments either by the actual purchase of spots or a purchase of futures to protect themselves.—From weekly report of Bache & Co.

Personal News

Roy Harris has been promoted to second hand in the cloth room at the Musgrove Mills, Gaffney, S. C.

Charlie Hodge has been promoted to second hand in the cloth room at the Alma Mills, Gaffney, S. C.

John R. Fernander is now overseer spinning at the Fountain Cotton Mills, Tarboro, N. C.

George Dearman is night superintendent at Everett Mills, Monroe, N. C.

Claud L. Lockman has resigned as overseer weaving at the Maginnis Mills, New Orleans, La.

W. Frank Smith has been appointed night superintendent at the Perkins Hosiery Mills, Columbus, Ga.

Roy L. Keown has succeeded his father, C. A. Keown, as master mechanic at the Lois Mill, Douglasville, Ga.

C. R. Evans has been made general overseer of the cloth room at the Alma and Musgrove Mills, Gaffney, S. C.

George H. Parker is now second hand in spinning at the Wahoo Manufacturing Company, Sargent, Ga.

Chas. C. Fagan has been made superintendent of night work at the Standard-Coosa-Thatcher Company Mills, Piedmont, Ala.

John D. McCauley has been given charge of all the spinning at the Standard-Coosa-Thatcher Company Mills, Piedmont, Ala.

—. —. Kyser, of Baltimore, Md., has accepted the position of superintendent of the Priscilla Mills, Ranlo, N. C.

W. W. Hinson has been transferred from night superintendent to assistant superintendent on day at Everett Mills, Monroe, N. C.

L. W. King has changed from Kings Mountain, N. C., to carder and spinner at Manetta Mills No. 2, Monroe, N. C.

L. J. Swink has been promoted from card grinder to night overseer in card room, Stowe Spinning Company, Belmont, N. C.

R. A. Thrower has changed from Sterling Spinning Company to the Stowe Spinning Company, Belmont, N. C.

D. C. Eaker has resigned as overseer of carding at Madora Mill, Mount Holly, N. C., and accepted the same position with the Eagle Yarn Mills, Belmont, N. C.

C. C. Hope, Jr., has resigned as overseer of spinning at Alsace Mills, Mount Holly, N. C.. and accepted a position with the Stowe Spinning Company, Belmont, N. C.

L. D. Dagenhart has changed from overseer of spinning at Woodlawn Mill, Mount Holly, N. C., to same position at Stowe Spinning Company, Belmont, N. C.

—. —. Bagwell has been appointed superintendent of the Elk Mills, Dalton, Ga. He was formerly carder at Swift Manufacturing Company, Columbus, Ga.

William Dampier has resigned as superintendent of the Cape Fear Cotton Mills, Fayetteville, N. C., to accept a similar position with the Morgan Cotton Mills at Laurel Hill, N. C.

David Clark, editor of the Southern Textile Bulletin, attended the meeting of the Georgia Cotton Manufacturers' Association in Atlanta this week and also visited Columbus and West Point.

C. A. Keown has resigned as master mechanic at the Lois Mills, Douglasville, Ga., and accepted a similar position at the Fort Mill Manufacturing Company No. 2 and 3, Fort Mill, S. C.

J. M. Merrow, president of the Merrow Machine Company, Hartford, Conn., manufacturers of the Merrow high speed overseaming, overedging and shell stitch machines, has recently returned from Europe on the steamer Paris of the French Line, completing an extended trip, combining business and pleasure. Mr. Merrow's itinerary included a visit to several of the company's sales distributors in England and on the Continent. His special mission was to study business conditions in these countries first hand, which he had an opportunity to do in several of the principal commercial centers.

J. E. Wright Goes With Borne-Scrymser Co.

J. E. Wright has resigned as superintendent of the Morgan Mills at Laurel Hill, N. C., to accept a position with Borne-Scrymser Company of New York as lubricating oil salesman. Mr. Wright will make his headquarters at Charlotte.

Stockton Commission Co. Open Charlotte Office.

The Stockton Commission Company, of New York, have opened an office in Charlotte, with F. W. Gurry in charge. Mr. Gurry will also continue to look after the operation of their Southern Mills.

Icemorlee Mills.

Monroe, N. C.

J. O. Edwards	Supt.
W. C. Quick	Carder
J. A. McCraney	Spinner
J. A. Craig	Night Supt.

Bobbins and Spools

True-running Warp Bobbins a Specialty

The Dana S. Courtney Co.
Chicopee, Mass.
Southern Agt, A. B. CARTER, Gastonia, N. C.

Drop Wires

Others manufacture copper-plate drop wires. So do we, when a mill prefers that finish, but it is an axiomatic chemical fact that the acids formed by sizing compounds and starches, plus the moisture from the humidifiers, which so freely corrode the copper itself, cannot and will not corrode the nickel.

Many mills are thus escaping steel rust and copper corrosion by using our nickel-plated drop wires.

STEEL HEDDLE MFG. CO.

GREENVILLE PHILADELPHIA PROVIDENCE

"Duplex" Loom Harness—complete Frames and Heddles fully assembled

Selvage Harness
Leno Doups
Harness Frames
Jacquard Heddles

SOUTHERN PLANT
Greenville, S. C.
HAMPTON SMITH
Southern Manager

Drop Wires
Nickel-Plated
Copper-Plated
Plain Finish
Improved Loom Reeds
Leno Reeds
Lease Reeds
Combs

MILL NEWS ITEMS OF INTEREST

Fort Worth, Tex.—The Fairhaven Mills of New Bedford, Mass., will move 21,000 spindles to this city and will manufacture tire cords.

Dallas, Tex.—The Dallas Cotton Mills have purchased 200 Stafford looms with which to replace old looms.

Kings Mountain, N. C.—The Dilling Mills have filed an amendment to their charter increasing their capital stock from $200,000 to $500,000.

Petersburg, Va.—The silk plant of John M. Stearne & Co., on the Appomattox River, near here, has been purchased by Warner Moore, of Richmond, Va.

Chattanooga, Tenn. — The Four Square Hosiery Company has been incorporated with a capital stock of $50,000 by C. M. Kyle, W S. Hall and others.

Dallas, Tex.—Among the many proposed cotton mills in this State, there are three that appear to be assured, a third mill for Dallas, a mill at McKinney and a mill at Mexia.

Abbeville, S. C.—At the semi-annual meeting of the directors of the Abbeville Cotton Mills, a dividend of three and one-half per cent was declared, payable June 30.

Houston, Tex.—The Houston Cotton Mills, to be built by W. A. Mitchell and associates for the manufacture of cotton blankets, have purchased a 5,000 spindle equipment from the Whitin Machine Works and 200 Draper looms.

Chattanooga, Tenn.—The Champion Knitting Mills is receiving bids for the erection of a two-story building, 50x179 feet, brick construction. The output of the company will be increased to 750 dozen pairs of hose daily. Walter C. Champion is president of the company.

Williamston, N. C.—The Nasef Manufacturing Company, formerly of New Bern, N. C., who recently closed out their shirt and overall manufacturing business in that place, will open a plant here within the next two weeks. They are now installing complete new equipment at their plant here.

Houston, Tex.—The Southern Bag and Burlap Company, which was recently incorporated here, as noted, has secured a building and will install machinery for manufacture of bags and burlap. They are interested in getting prices on equipment for stripping and weaving bagging. J. V. Scott is president and Geo B. Williams, vice-president.

Swannanoa, N. C.—Beacon Manufacturing Company, of New Bedford, Mass., Chas. B. Wood, president, retained E. S. Draper, landscape architect and engineer, Charlotte, N C., to prepare complete plans for village development of new blanket mill here, plans of which were recently reported. Chas. E. Waddell, engineer, Asheville, N. C., is in charge of sewer and water development.

Greenville, S. C.--The Southern Weaving Company, which was organized here last week, as noted, with H. D. Murlock, president, and J. W. Burnette, treasurer, has been incorporated with a capital of $150,000. The company, which will install spinning and weaving machinery for the manufacture of cotton specialists, has just awarded contract for their humidifying equipment to the Bahnson Company, Winston-Salem, N. C.

Salisbury, N C.—The Wallace-Wilson Hosiery Company, of Pennsylvania, has announced plans for opening a branch plant here, according to L. S. Moody, secretary of the local Chamber of Commerce. The size of the mill and other details have not yet been determined.

The Wallace-Wilson Hosiery Company was established in 1883, and has an unusually successful career. It maintains sales offices in New York and London.

Columbia, S. C.—The four plants of the Pacific Mills suffered considerable damage from the heavy storm which recently visited this section. It is estimated that at least 50,000 window panes in the mills and villages of the Pacific Company were broken by the hail storm and the interior damage from water and flying glass was considerable. It is said that the total damage will amount to $25,000.

Stuart, Va.—A new mill for the manufacture of blankets has been organized here and is known as the Stuart Mills, Inc. Milton G. Smith, well-known textile machinery agent of Greenville S. C., is president and treasurer of the company, Walter P. Barnes is secretary and general manager, and S. A. Thompson, of Stuart, is vice-president. The company is capitalized at $50,000.

The initial equipment is 50 blanket looms, with necessary carding and spinning machinery. The company will use the building built here three years ago for a cotton mill but which was never used. All of the machinery has been purchased and it is hoped to begin shipment by September 1

Walter P. Barnes was formerly manager of the blanket mill at Draper, N. C., and has had wide experience in the blanket business.

Rockdale, Tex. — The Rockdale Chamber of Commerce is making efforts to get two textile mills for the Rockdale area, and is conducting an exhaustive survey, under the direction of C. F. Drake, secretary of the chamber A four-page questionnaire has been submitted to the Chamber of Commerce by two textile mill companies of New England now seeking locations in the South. The salient questions to be answered in this questionnaire are regarding quantity of water and chemical analysis of same. Rockdale has abundant water and chemical analysis of this water is now being made to determine its mineral content. The fuel supply about Rockdale is unlimited. Vast lignite beds underlie the whole section and mining operations are already being carried on extensively here, several large companies taking out thousands of tons daily.

One company proposes to erect a mill of about 30,000 spindles and looms for the manufacture of cotton duck. twills, etc. The other proposes to install sufficient spindles to keep 500 to 700 looms busy on the manufacture of corduroys, velveteens, etc.

LaGrange, Ga.—The Valley Waste Mills have started upon a new era in the manufacturing of their unique roving rugs, which they are now offering for sale. Since these washable and reversible rugs were first put on the market, about two months ago, the demand is reported to have been very good, coming from all parts of the country. Eight attractive colors, blending well in a herringbone weave, is the regular design. Varying in sizze from 24x28 inches to 27x54 feet, easily washable and flexible, these rugs, with a three-ply soft twist roving filling, present one of the most useful and cheapest products that have ever been offered for the home. The warp of the rug is 8/3 ply cotton yarn, also soft twisted in a regular direction. The filling size is eight hank-three ply roving, from long, staple cotton, affording strength and durability to the rug in the filling direction; the warp is almost equally as permanent. Appropriate borders are

THE FARISH COMPANY
COMMISSION MERCHANTS
100 WORTH STREET
NEW YORK

K-A Electrical Warp Stop
For Looms
is backed by twenty years of experience and steady growth. It is adopted by representative mills weaving cotton, silk, worsted and woolens.
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E. S. DRAPER
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Complete Topographic Surveys
General Designs, Planting, Grading and Detail Plans
Supervision of Landscape and Engineering Construction
Sewer and Water Development
Largest Landscape Organization in the South

included in the design, with fringes at the warp end. The herringbone weave presents the pattern on both sides of the rug, therefore, when one side becomes soiled, the other side may be used.

Deny Riverside Ginghams Were Offered Below Quotations

The Riverside and Dan River Cotton Mills have flatly denied rumors which have been current to the effect that they had sold a large quantity of goods at somewhat under their quoted prices. These rumors had been discussed here in the lobby and were spreading.

The following letter, signed by George P. Ray, was read before the Southern Wholesale Dry Goods Association in Charlotte.

"Referring to the rumor which has been current for several days past in connection with an offering which has been made by the Mammoth Trading Co., of New York city of Dan River dress ginghams in full piece and shorts, and which in some instances has been cited at 10 cents, a number of our good friends have urged us to make a statement in connection with this rumor, and while we at first regarded it to be the same as some other rumers that have ,come onto the market namely, entirely too ridiculous to be worthy of any consideration, yet in deference to these requests, and in order that the matter may be understood by all, we beg to report as follows:

"The rumor referred to above in substances, is as follows: The The Mammoth Trading Co. of New York, as above stated, in their capacity as brokers, offered on the market some of our products in full size pieces, as well as shorts, at didiculously low prices, and which any conditions of the market. At the time this offer was made there was circulated a rumor that we had sold to the Lamport Manufacturing Supply Co. a large quantity of Dan River dress ginghams amounting to 3,000 or 3,500 cases for export, and the Lamport company, being unable to market the goods for export, offered them on the domestic market through the Mammoth Trading Co.

"Some parties told us that they have the above information from but in each instance it seems impossible to gain definite information as to who represents the reliable source, all of which, of course, is thoroughly clear to us, for the rumor of the transaction with the Lamport Manufacturing Supply Co. is absolutely without fact or foundation , as we have no such transaction with the Lamport Manufacturing Supply Co., nor have we sold them any of our Dan River dress ginghams during the present year, and any goods that they may be offering at the reported price of 10 cents represents previous clean-ups of shorts, odds and ends that we have made to them last year, as well as to represent to them a decided loss.

"As far as the Mammoth Trading Co. is concerned, we have never had any dealings with them direct or indirect, and, in fact, at this writing are entirely ignorant of the personnel of their concern.

"We will not undertake to analyze or go into the insidious purpose that may be at the bottom or the incentive of this piece of gossip or competitive propaganda, and we simply want to make a denial of the whole rumor. We are prompted to direct this letter to you, as there is entirely too much of this sort of gossip going around, and some people are only too willing to take it up and pass it on, and, of course, some innocent jobber, hearing the rumor without knowing the facts, might be led to cut the price of his ginghams, which, if followed by others, would sooner or later result in demoralization and the loss of a great many thousands of dollars to the jobbers of the South.

"While we know that the Mammoth Trading Co. have offered our goods, and it may represent some goods which Lamport carried over from last year, our information is also that they may have offered some goods which have been put into their hands by jobbers to sell, and over which, we are confident you appreciate, we have no control, and hence are not responsible.

"With many thanks for your kind consideration in bringing this matter before the association, so it may be understood by all, we beg to remain, with every good wish for the happiness and future success of your most admirable association.

"RIVERSIDE AND DAN RIVER COTTON MILLS, Inc."

Payroll Taken By Bandits.

New Orleans.—Two bandits Saturday held up the paymaster of the Fulton Bag and Cotton Mills Company and escaped in an automobile with $3,700.

New Newport Color.

Newport Chemical Works announces the production of a color known as Newport Fast Pink GR Extra, which is particularly interesting for cotton printing, as it yields fine strong bluish shades and will discharge to a clean white. It has fair fastness to light and is excellent to washing.

LOOM STRAPPING

Designed and made of leather of the proper quality, weight and toughness of fiber to meet the actual working stresses. The use of judgment in manufacture means to you,

Gain in Production at Lowest Strapping Costs in Keeping With Service Required

We specialize and know your looms.
Ask your jobber.

The Druid Oak Belting Co., Inc.
Baltimore——Boston

MAKE YOUR WANTS KNOWN
Through The
Bulletin Want Department
Read in More than 95% of the Southern Textile Mills
Rate: $1.50 per inch per insertion

For Sale
1—Model K Barber-Colman Tying in Machine, nearly new.
2—78" Reed Space Modified D Draper Looms, new.
10—Lowell Cards, good condition.
3—New Deep Well Pumps with motors.
Textile Machinery Exchange
Box 1355 Charlotte, N. C.

WELL DRILLING AND DEEP WELL PUMPS
We do the engineering, and have had 32 years experience solving water problems satisfactorily for textile mills.
Sydnor Pump & Well Co., Inc.
Richmond, Va.

Joseph L. Davidson Co.
Established 1889
Designing Card Stamping Repeating
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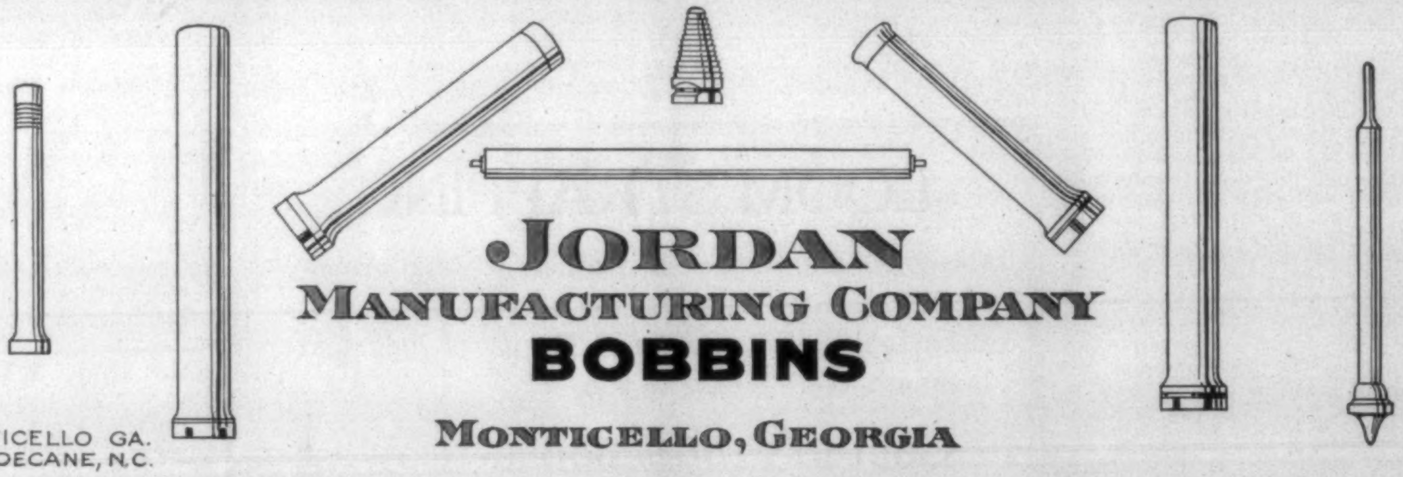

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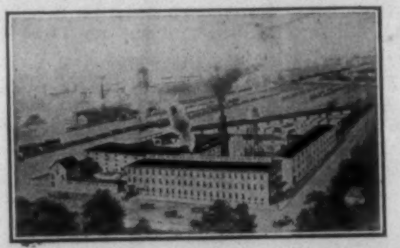

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Bobbins, Spools and Shuttles

Correspondence Solicited Catalog on Request

Much Interest in Coming Convention

(Continued from Page 15)

is already crippling the home markets and the reported plans of foreign mills, particularly the British Calico Printers' Association to further increase these importations. American association officials have always contended that the tariff is a business proposition and should not be made a political issue; that recent developments have demonstrated that the domestic troubles of foreign countries with cheap wages and depreciated currencies are forcing them to extremes that may seriously cripple some of our major industries, hazarding the employment of millions of workers and correspondingly curtailing the purchasing power of innumerable American families. That this is a problem of immediate and vital concern, not only to the manufacturers and to their operatives but to the nation at large is manifest.

It is expected that there will be some 800 of the foremost manufacturers of the country present at this convention. These will come from all sections of the South and from the North and East as well. Large delegations are expected from New York, Boston, Philadelphia and other distributing centers to participate in the discussion which is just now the livest and most vital problem confronting the American textile industry. It is probable that a special meeting of the augmented National Council of American Cotton Manufacturers, embracing the entire textile industry of the country, will be held in connection with this convention to further consider the situation.

The program for this meeting, the 28th successive session of the American Association, already announced, contains many attractive features, including an address by the new Secretary of the Navy, Hon. Curtis D. Wilbur, of Washington. Sessions will be held on Tuesday and Wednesday, May 27 and 28, with the annual banquet on the evening of May 27. William E. Beattie, of Greenville, S. C., is president of the association.

Social Workers Conclude Meeting

(Continued from Page 13)

renamed president. Other officers elected are as follows: C. W. Coleman, LaGrange, Ga., first vice-president; Luther Hodges, Spray, N. C., second vice-president; Miss Florence Bushell, Greenville, third vice-president; Mrs. Joe Gray, Gastonia, secretary, and Miss Belle Fuller, Pacolet, treasurer; and as additional members to serve with the officers on the executive committee; L. P. Hollis, of Greenville; Miss Pearle Wyche, of Greensboro, and Miss Rose Brimmer, of Danville, Va. The nominating committee consisted of Mrs. M. O. J. Kreps, Jr., chairman; Miss Alberta Fox, Miss Pearl Wyche, Miss Bess Herring and E. F. Carter.

Charlotte was chosen as the next meeting place of the association, an invitation being extended from Greenville also.

Will of James D. Hammett Filed in Anderson.

Anderson, S. C.—The will of the late James D. Hammett has been filed for probate. It is dated April 16, 1921, and makes his widow, Mrs. Lula P. Hammett, his brother, George Hammett, and J. E. Sirrine, of Greenville, executors of the estate. The will bequeaths $20.000 to Wofford College of Spartanburg, to be kept invested by the board of trustees and the income used in aiding in the education of deserving students unable to pay their tuition. Five thousand dollars is left to St. John's Methodist Church, this city, to be invested, and income to be applied as aid to pastor's salary. Special bequests are made for his widow and son, Lawrence Hammett, and remainder of the estate to be divided equally among his four children. No estimate was given as to the value of the estate, but it is currently believed to be in the neighborhood of a million dollars.

Obituary

Columbus Baldwin.

Columbus Baldwin, age 58, a member of the cotton goods firm of Woodward, Baldwin & Co., New York and Baltimore, and one of the best known men in the textile trades, died last Friday at the Knickerbocker Hotel, New York. His death was due to pneumonia.

Mr. Baldwin was born in Waterbury, Md., and after graduation from Dickinson College, entered the employ of the New York Life Insurance Company. He left this company in 1901 to become associated with Woodward, Baldwin & Co. From 1901 to 1915 he was in charge of the company's branch at Shanghai, China. At the end of that time he returned to this country and became a partner in the business of Woodward, Baldwin & Co.

J. F. Hamilton.

J. F. Hamilton, father of C. A. Hamilton, well known mill superintendent and textile machinery salesman of Charlotte, died at the home of his son in Charlotte on Friday of last week. Mr. Hamilton was 74 years of age and was a veteran of the Civil and Spanish-American Wars.

Mr. Hamilton was born in Randolph County, North Carolina. He was a music teacher by occupation. He was married twice. His first wife, who died in 1906, was Miss Sarah Hill, of Randolph county. His second wife was Miss Chattie McNeill, of St. Paul, N. C.

Mr. Hamilton is survived by seven sons: C. A. Hamilton, of Charlotte; F. C. Hamilton, of New Bern; E. L. Hamilton, of Lumberton; C. B. Hamilton, of Brooklyn, N. Y.; J. E. Hamilton, of Louisville, Ky.; W. T. Hamilton, of Memphis, Tenn.; E. F. Hamilton, of Salisbury. One daughter Mrs. Lee Hern, of Kings Mountain.

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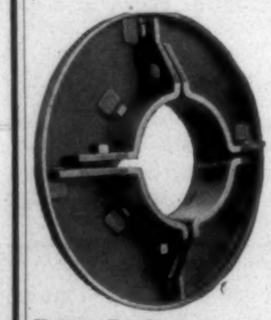
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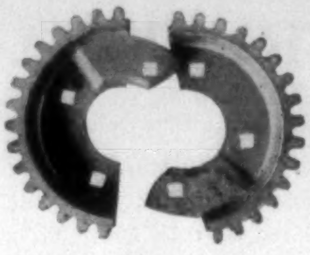

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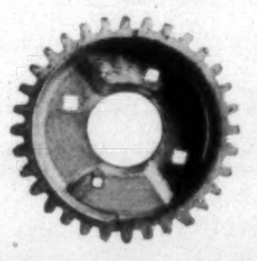

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NICHOLS MFG. COMPANY
Asheville, N. C., U. S. A.

Number Six

(Continued from Page 19)

to and above speed recommended by the builders. We get equally as much production at night as in day, as we had a lighting engineer to lay out our lighting system, which called for about three times as many lights as we formerly were using.

This is not written to boast of what we have done in the way of production and quality, but as we look back like any one else, we can see where we might have done better. But as we have now had about seven years' time to test the new and modern machines as against the old out-of-date and behind the times machinery and am just stating facts, when I say we were getting 75 per cent. Some will say regardless of the age of the machinery this should be exceeded, but from actual experience we have found quite a lot of places where it is this low and sometimes worse, and is not the fault of the men in charge, but to the equipment, and the same men in charge would do equally as good or better than we have with good equipment.

It is not a question of can the mills afford to buy new or better equipment, but can they afford to keep the old out-of-date and worn-out junk?

To my mind the mill that is equipped with the best opening machinery cards enough to card light, the best and latest drawing frames, latest model fly frames, spinning of wide gauge tape driven clutch spindles with individual motor drive, and will spend their money wisely and buy all necessary supplies to keep the mill up will be doing business when the ones that continue in the old rut are gone and forgotten. If well equipped it means better quality, less spent for supplies, hence larger dividends.

U. D. ALE.

Number Seven

In this day of improvements, it is quite a problem to outline a layout that will give the best results from every angle. However, in this article I expect to deal with the coarse goods mills, as I have more experience on these goods than any other.

To begin with, the mixing room should be as large as possible—at least large enough for three days' mix. I would want to feed the cotton to vertical openers first, and have it go from these machines to a first-class opening and cleaning machine and then to breaker pickers. My idea is to clean the cotton in the opening department as thoroughly as it can be done.

I would want a conveying system for the breaker pickers that would give an even feed to the hoppers, or, as even as it is possible to get. I would have the breaker pickers equipped with evener attachments, with the beater that is best suited for the work, Kirschner preferred. My plan would not include a finisher picker at all and laps would be carried direct from the breaker pickers to the cards.

While I am of the opinion that the time is not far distant when the picker room will be done away with entirely, this article is calculated to cover the equipment in general use at the present time.

The cards should be run at a moderate speed and I would have the sliver to weigh from 50 to 55 grains, carding from 800 to 900 pounds per week per card. Experience has taught me that it is not necessary to card so light on this class of work.

The wire for the cards should be selected with care, that is, be certain to get the wire that is best suited to the work. It should be seen to that they are kept sharp at all times. It is important that the settings be watched to see that the machine is kept in first-class working condition. If these rules are observed, I am sure that good results can be had.

I would run only one process of drawing, and would prefer having eveners on them. However, I would run only one process even though they were not so equipped. They should be run at a roll speed of from 250 to 275 RPM. The one process does not require as much labor as two processes.

I would run one process of roving and would want 12x6 frames, which gives a large bobbin, making it much easier for the spinners, enabling them to run more sides and make better wages and at the same time save a lot of money for the mill.

I would select spinning frames with as large ring as it would be practical to run for the numbers to be spun. This would not require as much doffing and would increase the efficiency of the machines quite a little over the small ring. I would prefer tape drive spindles, as I am convinced that it pays to use them from the fact that they tend to prevent slack yarn, if for no other reasons. If kept in good condition, there is no question but that they will keep down to a low minimum the slack yarn, which is an advantage over the band drive. The band drive will also do this as long as tight, but they will become loose and probably run two or three doffs before they come off or are pulled off. On the other hand, with the tape drive, when the tape becomes slack, the idler takes up this slack, thereby giving the yarn practically the same twist at all times.

Spooling, twisting, warping, and all finishing machines should be selected with care so that the best results can be obtained from as few employees as possible. Special attention should be given to the loom beams if they are used, that is, to have beams the heads of which are as large as it is practical to use so that as much yarn, or as many cuts, could be put onto one beam as possible, which will tend to bring up the average efficiency to a great extent. If making heavy goods, such as hose and belting duck, I would have creels behind the looms to eliminate beaming. In this case,

The question of uniform and dependable results often resolves itself into the question of using supplies of tested value.

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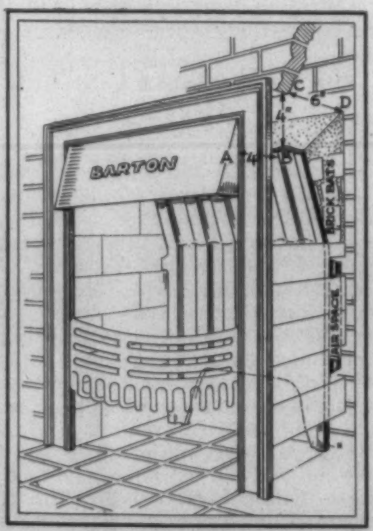

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Charlotte, N. C.

be required for the creel and loom, but not as many looms, as the increase in efficiency would take care of several looms over the beam method.

There is much that can be said regarding the arrangement of the machinery in a mill. In providing for orderly, systematic arrangement, it might be necessary to expend a little extra money but once the arrangement is complete, the expense ceases, while the extra expense in a badly arranged mill never ceases, as more labor is required to handle the same amount of product.

Sometime ago I made some experiments on drawing and roving machinery and as a result have changed from two processes of drawing to one process, cutting out one-third of the labor on drawing. We also had slubbers and intermediates, but have done away with slubbers entirely, selling them to another mill. At present, we run breaker and finisher pickers, cards, one process of drawing, intermediates, and spinning and get very good results in this way. In this connection, we have a saving of two drawing tenders, four slubber tenders, two intermediate tenders, one oiler, and one section man. All of this was accomplished with old machinery, and a great deal more can be accomplished with new and modern machinery. When we commenced this experiment, almost everyone to whom it was mentioned would tell us that it could not be done with any degree of satisfaction. However, it is being done and very satisfactorily, at that.

Some of our intermediate tenders did not like this change on account of having to creel cans in place of ers of oriental rugs are not particular about the uniformity of the considerably more floor space would bobbins. However, they all were willing to try it, with the result that they are all better satisfied and making more money. We have not changed a frame hand in months.

In the course of time, I expect to have this same mill running without finisher pickers; that is, of course, provided I remain in charge of it.

I feel that if everyone will get the idea of how "Dad" and all the old-timers did things out of their heads and settle down to good, constructive thinking, a great deal can be accomplished with the old mills that are in operation today.

Reverting to the subject of the changes mentioned, in addition to the saving in labor, we also save the reworkable waste from the processes eliminated, as well as power and supplies for these machines.

TED.

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WHITINSVILLE SPINNING RING CO.
WHITINSVILLE, MASS.

Dyeing Knit Goods

(Continued from Page 14)

dyes in their products. They depend largely on the wonderful construction of their fabrics to make their products reputed and valued throughout the world. In almost any of their expensive floor covers one may detect off-shades in the oriental dyes, but which off-shades are submerged by the beauty of the pattern and the skilfully constructed texture. The compactness and regularity of the loops or pile predominate over any fault in the matching of colors or in the irregularities of colors in any given shade. But when a dyer of this country is required to reproduce certain of these oriental shades in either knitted or woven fabrics he is often puzzled as to just which shade in the color will be desired, for a portion of a single color may vary in shade from another portion of the same color. It simply illustrates some of the difficulties with which dyers must contend.

New Reflector For Highly Concentrated Light

For use in any industrial operation where a highly concentrated light is desired over a limited area, a new reflector has been developed recently by the Westinghouse Electric and Manufacturing Company. This reflector has been designed to give the maximum light distribution from a 25 to 50 watt mill type lamp, insuring a high intensity of illumination over the working area. In such work as machine sewing, coil winding, and any other operation requiring accurate vision, the reflector is particularly suitable.

The body of the reflector is a one-piece steel stamping to which is applied a ground coat of fired porcelain enamel and then a finishing coat of enamel, green on the inside. The reflector is provided with a brass holder so that it may be fastened on a brass shell socket without other support.

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Town_______________

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_______________Superintendent

_______________Carder

_______________Spinner

_______________Weaver

_______________Cloth Room

_______________Dyer

_______________Master Mechanic

Recent changes_______________

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How a Master Mechanic Increased Mill Profits

(Continued from Page 12)

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N. C. State College Textile Seniors Inspect Mills

Twenty-one members of the senior textile class of the North Carolina State College, Raleigh, N. C., recently inspected the textile mills in the Carolinas and Virginia. The trip was made in the "White Swan," one of the large busses of the Raleigh-Durham line.

The Erwin Cotton Mills at Durham were the first to be visited. Here the class saw the manufacture and finishing of wide sheeting and denims. From Durham the class went to Greensboro, where they saw the large denim mill and the only print cloth mill in the South. Tuesday morning was spent in the Marshall Field plants at Leaksville and Spray, where jacquard bedspreads, cotton blankets and axminster carpets are made. This is the only mill in the South making this class of carpet. After going through the mills the class was entertained at lunch by the management of these mills. In the afternoon the class went to Danville, Va., and were shown through the large Riverside and Dan River Mills, where gingham fabrics are made. On Wednesday a short stop was made at the Erlanger Mills in Lexington. This was the first fancy mill to be visited, and it also manufactures the celebrated B. V. D. fabric. All of Wednesday afternoon was spent at the Cannon Manufacturing Company towel mills at Kannapolis. Prior to going through the mills the young men were entertained at lunch by C. A. Cannon, president of the mills.

On Thursday the Parks-Cramer humidifier plant, Charlotte Knitting Mills and the Chadwick-Hoskins Cotton Mill in Charlotte were visited.

In order that the textile students might see where some of the power which drives the mill machinery in the Carolinas is developed, an hour was spent in looking through a new power plant at Mountain Island.

The class saw how yarn is mercerized at the plant of the American Yarn and Processing Company at Mount Holly, and then proceeded to the Loray and Arkray Mills at Gastonia. The Loray Mill manufactures tire fabrics and the Arkray Mill makes fine yarns up to 120s.

The last town to be visited was Greenville, S. C., where the party was shown through two of the fanciest mills in the South, the Judson and Dunean. At these mills all kinds of fancy fabrics are being made.

How mills are designed was shown these young men at the offices of Sirrine & Co., architects and engineers. The Steel Heddle Company plant was also visited, and also the Union Bleachery. John W. Arrington, president of the Union Bleachery, entertained the party at lunch. At almost every place visited graduates of the State College Textile School were holding responsible positions.

Hosiery Exports High Last Year

American exporters did a big business in hosiery last year. Eighty million pairs of American stockings were shipped overseas in the twelve months for the use of people of every clime and color.

Cuba and Argentina took first and second place as buyers of American cotton hosiery in 1923. according to Commerce Department figures, both taking a greater quantity than England, which had held first place in 1922. In fact, Cuba purchased a third more American cotton hosiery in 1923 than in 1922, while England reduced her purchases to less than half the 1922 quantity. In addition to Cuba and Argentina most other Latin-American and West Indian markets purchased larger amounts of cotton hosiery in 1923 than in 1922. Continental Europe, with the exception of the Scandinavian countries, bought less cotton hosiery in 1923 than the preceding year. Total cotton hosiery exports were 5,159,750 dozen pairs, valued at $10,525.183.

Artificial silk hosiery did not enjoy as successful a year as cotton hosiery. England. the chief market for artificial silk hosiery, took only 338,961 dozen pairs, valued at $1,651,921, in 1923, compared with 521,310 dozen pairs, valued at $2,310,242 in 1922. Argentina, the second largest market for artificial silk hosiery, also purchased less in 1923 than the previous year but did not show as great a decline as England.

Australia, another important market, bought only 33,275 dozen pairs, valued at $187,498 in 1923, compared with purchases of 150,957 dozen pairs, valued at $605,163 in 1922.

Silk hosiery made the largest percentage gain in 1923, with exports of 440,885 dozen pairs, worth $4,399,038, compared with 342,650 dozen pairs, valued at $3,368,542 in 1922. England is by far the best market for silk hosiery, purchasing nearly half of the total foreign sales and nearly three times as much as the second largest buyer, Argentina. The sales of American silk hosiery in England in 1923 showed a very large gain over 1922, amounting to about eighty thousand dozen pairs, which was in marked contrast to the trade in cotton and artificial silk hosiery. Argentina also purchased a larger quantity in 1923 than in the preceding year, exports to that market amounting to 61,912 dozen pairs.

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Recent Textile Research

(Continued from Page 9)

horizontal coordinate. When the curve reaches the point where it becomes a straight line the yarn is naturally stretching with pure elasticity. If now a tangent be drawn to the curve prolonging the straight portion to the axis of the elongations the length of the straightened but not stretched yarn will be determined, and by coming up to the curve and over to the axis of weights the total weight of the scale pan may be determined which is necessary to straighten but not to stretch the yarn. The amount of this weight has been determined at the institute for a wide variety of yarns. For 11/23s square woven tire fabric yarn, it has been officially defined as 75 grams. Of course it varies with every different character of yarn. It is frequently desired to determine the relation between the original and roll width of fabric in the loom. This may be found very approximately by measuring the crimp as described above in the filling threads as they rest in the fabric. For this purpose a piece of apparatus much like that used at the Bureau of Standards has been constructed at the institute. Instead of the scale pan a very light wire basket is used and for scale weights 1½ inch lengths of fine steel wire are found to serve very satisfactorily. The wire lengths are piled into the basket, for very light yarns one or two at a time, and for heavy yarns five or ten at a time. By means of a glass and fine index wire the elongations are read directly against the scale in hundredths of an inch. A plot is carried on simultaneously with the readings and, as soon as the elasticity law is determined, the tangent described above is drawn and its stretch length noted. In this manner yarns as fine as 60s have been measured for crimp in the fillings of shirtings, crepes, and very light twills. Knowing the roll width of the fabric and assuming that the shuttle threads are straight in front of the reed the reed width may be calculated with fair accuracy.

5. The development of a constant load-rate textile testing machine. It has long been known that the speed with which the pulling jaw applied the load in textile testing machines had a considerable influence upon the apparent tenstile strength of the material. A series of tests run under very exact atmospheric conditions at the institute, in a vertical testing machine of the usual type upon eight-ounce cotton duck and paper makers' wool felts, gave a variety of results differing by a margin of from 10 to 20 per cent, depending upon the speed of the pulling jaw. A speed of 12 inches per minute has been declared standard and is widely used. Unhappily, however, this does not solve the whole difficulty. Textiles do not break like homogeneous materials such as iron or steel. In the latter all the fibers at a given cross-section are ruptured by the test. Textiles are made up of numerous fibers interlaced and at rupture a certain portion are broken, while a larger percentage are disentagled and slip by one another without breakage. When one considers this fact it is perfectly evident that the element of time plays a very important part in the apparent strength of any textile. To make this statement more concrete, a vertical fabric testing machine, set up in the usual manner with a jaw speed of, say, 12 inches per minute, might rupture a steel tape in five seconds. A piece of balloon fabric might consume eight seconds. a piece of belting duck ten seconds, a piece of tire fabric fifteen seconds, and a piece of paper makers' felt might require twenty seconds in breakage. The above specimens of steel tape and fabric might be so chosen in width and material as to be of precisely the same gross tensile strength when tested under a quiescent or dead load.

From the above it is evident that the elasticity or stretchiness of the specimen determines the time elapsing between the application of the load and the instant of rupture. A very stretchy specimen will consume many seconds before rupture takes place, while a steel tape with its characteristic rigidity would be broken in a very short interval of time. Therefore, to carry out accurate tests upon textile materials, some form of testing machine should be devised in which the elasticity of the material exerts no influence upon the rate of application of the load.

A very large percentage of all the machines used at present consists of dead weight or pendulum machines. A pendulum is nicely pivoted upon ball bearings. The upper end of the pendulum is bound to a cylindrical drum around which a chain is wrapped. The lower end of the chain is pinned to the upper jaw. The lower jaw is attached to a screw and nut, the latter being actuated by a gear train in such a manner as to give a speed of the pulling jaw 12 inches per minute.

Of course if the jaws were rigidly connected by, say, a steel specimen, the full speed of the pulling jaw would be immediately transferred to the drum and through it to the finger on the dial. It has been proposed by numerous writers upon this subject to define the fastest rate at which a rigid specimen could possibly cause the reading to reach a given figure as the "machine rate of loading." This could be made constant for a rigid specimen and might be, as proposed, 250 pounds per inch of movement of the upper jaw. On the other hand, the rate at which the load was actually applied to a given specimen, depending as pointed out above upon its stretch, would vary widely with the different character of specimens. This has sometimes been defined as the

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"fabric rate of load" and is indicated by the load imposed upon the actual fabric per unit of distance travelled by the pulling jaw. The fabric rate of load cannot be expressed as pounds per inch or pounds per second since it would presumably vary widely between two specimens of the same fabric. At present, machine rates of load vary from 60 to 500 pounds per inch of travel of jaw while the fabric rate of load would easily vary three or four hundred per cent with the character of the various fabrics tested. It is therefore evident that, while such conditions exist, there must be wide discrepancies in the apparent strength of textile materials and any effort made to eliminate such difficulties should command immediate and careful attention.

A new type of testing machine has been perfected by Mr. Henry L. Scott. At the top of a rectangular frame are provided heavy ball bearings for the trunnion axes of a tilting beam. The latter moves with very little friction and is nicely balanced so that it can be made to swing through certain angles promptly and with negliible internal strains. The tilting beam provides an inclinable rectilinear track along which roll heavy cast-iron disks. These disks constitute the load element of the machine and are yoked to a chain which runs over a guide pulley and downward in a vertical direction to the upper jaw. When the tilting beam is horizontal there is naturally no pull upon the jaw chain. As the inclination of the beam upon its trunnion axis increases, the component of the disk weights increases similarly and produces a greater and greater pull upon the upper jaw. If it were possible to swing the tilting beam to a vertical position the full weight of the disks would be thrown upon the specimen. The weights, at all times, are free to travel down the inclined plane which the tilting beam constitutes, but the pull on the jaw chain depends simply upon the angular inclination of the tilting beam. In the event of a rigid specimen the disk weights would remain near the top of the inclined plane. With a stretchy specimen between the jaws, the weights would automatically assume a position farther down the inclined plane. Provided, however, that the angular inclination of the beam was the same in the two cases above mentioned, the pull on the specimen would be identical. The adjustable lower jaw of the machine is wholly stationary and merely holds the lower end of the specimen. By means of the upper jaw the load is applied in the manner described and, by measuring the inclination of the beam, the amount of the load may be determined. In this manner the stretch of the fabric is automatically taken up and the fabric rate of load may be made uniform and of any desired amount, whatever the character of the fabric.

This machine has been experimentally developed at the institute in part at least and, while its first form is complicated and cumbersome, it is being redesigned in a much simpler maner and with very many less parts. Experiments made upon this type of machine show that a portion of the variations in the apparent strength of textile specimens is due to unavoidable characteristics in the pendulum type of machine. The constant load-rate machine gives more even results for a given fabric since it imposes the load with perfect uniformity whatever the elasticity of the specimen may be. It is hoped before long to have this machine in a novel and thoroughly practical form. Eighty specimens of balloon fabric tested in machines of various capacity and type showed much less variation in the constant load rate machine with a rate of 60 pounds per minute, than in any other.

6. Abrasion and flexure in fabrics. Numerous queries come to the institute as to the relative durability of fabrics. This difficult problem has been studied from many angles and the solution of it is not yet by any means complete. A new machine has been recently constructed in the textile laboratory in which a combination of brasion and flexure may be applied to a fabric specimen. It consists of a hard steel blade 3/16 inches thick, the upper edge of which is rounded to as perfect a semi-circle as possible. The specimen of the fabric to be tested is folded over this rounded blade 180 degrees. The blade is given a vertical oscillation of six inches whereby it rubs the surface of the fabric and with each abrasion folds the fabric through 180 degrees. The fabric is in the form of an unraveled strip specimen and is given a tension equal to its weight in ounces per square yard. After abrasion and folding to the number of some thousandths, the specimen, raveled to one inch in width, is tested for tensile strength. The reduced tensile strength compared to its original value is a measure of the resistance of the fabric to abrasion and flexure. This is at present a subject of investigation at the institute and it is hoped soon to be able to show some consistent results for this method of test.

Connecticut Board Opposes Child Labor Amendment.

New Haven, Conn.—Connecticut's State Board of Education has gone on record by unanimous vote as being opposed to the proposed child labor amendment to the Constitution now before Congress, on the ground that the bill is harmful to the best interests of Connecticut children and that the entire affair should be left to State legislation.

Frederick S. Jones, dean of the academic department of Yale University, is president of the State board. Arguments in favor of the board's action were delivered by Lieut. Gov. Hiram Bingham, a professor at Yale. Secretary A. B. Meredith was instructed to notify Connecticut senators of the action, and he sent a message immediately.

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Cotton Goods

New York.—The higher cotton markets toward the latter part of the week resulted in more inquiry for cotton goods in the primary markets, but only a small amount of actual business resulted as buyers are not yet ready to pay higher prices. The increasing curtailment is proving a steadying factor, according to the opinion of many cotton goods merchants who believed that a continued reduction in mill output will prove a very material influence in strengthening the markets.

The manufacturing trades have yet to buy a considerable quantity of goods that they will need in the next few weeks. This condition is especially true in the bag trade, where it is said that stocks are very low and many manufacturers have not covered their actual needs. The jobbers have as yet bought only very sparingly of practically all kinds of cotton goods and many merchants believe that a much stronger buying movement should develop before much longer.

Primary markets were firmer at the end of the week. Buyers who were in the market for print cloths and sheetings were unable to get goods at prices based on 8½ cents for 64x60s and 7 cents for 6.15 sheetings. Mills and selling agents were stiffer in their prices ideas and held out for better prices.

Print cloths rose to 8¾ cents for spot 38½-inch 64x60s, which price was bid steadily. Some business was done at 8⅝ cents, with 8½ cents firmly declined. Bids of 7⅜ cents for 6.25 goods brought no mill response and even 7½ cents could not be done freely. Narrow goods advanced to a basis of 5¾ cents for 27-inch 9-yards.

The 6.15 sheeting was in steady demand at 7 cents, but mills persistently refused to sell contracts at that figure. At the close 7⅛ cents was the best possible on spots. Most mills wanted 7¼ cents. Other sheeting constructions, especially the coarser yarn fabrics, remained quiet.

There was little or no business done in other goods outside of silk and cottons and some specialties in fine yarn goods that are being sampled for the coming season.

Sales of spot goods made up the bulk of the trading in the cotton duck division of the market. Prices as a whole were slightly the average of the preceding week. Goods offered from second hands covered almost the entire lines of duck construction. Practically the only business was done by the mills was in single and double end filling army duck and enameling duck.

The print cloth market at Fall River for the week has continued very dull, with estimated sales placed at 30,000 pieces. Buyers have appeared rather indifferent and good sized orders have been practically absent from the market. The bulk of the sales is comprised of small lot orders and confined to a few constructions in the wide and narrow styles. Manufacturers manifest about as much interest in the market as buyers, although it is noted there is a scarcity of some numbers usually found in quantity in this print cloth center.

That some goods are scarce is noted in narrow styles, such as 25-inch, 40x32, 14.75, which have been reported sold at 4¼ cents during the week. Altogether, about 4,000 pieces were sold during the week at this figure, the price having advanced from 3⅞ to 4¼ cents. The reason for this advance is attributed to the scarcity of this style.

Cotton goods were quoted as follows:

Print cloths, 28-in., 64x60s	6¾
Print cloths, 27-in., 64x60s	6½
Gay goods, 38½-in., 64x64s	9
Gray goods, 39-in., 68x72s	10
Gray goods 39-in., 80x80s	13½
Brown sheetings, 3-yard	14¾
Brown sheetings, 4-yard	12
Brown sheetings, stand.	15¾
Ticking, 8-ounce	26
Denims	24½
Staple ginghams	15
Kid finished cambrics	9½a10½
Dress ginghams	18½a21

Hongkong Piece Goods Imports.

Cotton piece goods imported into Hongkong during 1923 amounted to £1,190,112 as compared with £902,215 in 1922. The principal and best paying business was done in fancy cloths, such as brocades, figured and striped poplins, and the better class of printed cloths. The bulk of the piece goods sold in Hongkong is of British and Japanese manufacture, and only a few special lines of heavy goods such as sail canvas and shoe duck come from the United States, says Consul Leroy Webber, of the Department of State.

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The Yarn Market

Philadelphia, Pa.—The whole list of yarn prices was much steadier and somewhat higher after cotton advanced last week. Practically all Southern yarns were moved up a cent a pound on the strength of the cotton market. Many lots of yarn that had been offered at very low prices were withdrawn and the whole price situation was considerably improved.

Actual business continued on a very small scale, with the bulk of the trading confined to small lots for spot and prompt shipment. The best demand was for coarse yarns made from tinged stock to be used by manufacturers of carpets, upholstery and insulators.

Curtailment of production increased somewhat during the week. It is estimated that curtailment in the South was about four per cent greater than during the previous week. Stocks on hand at Southern mills are generally regarded as being small enough not to prove burdensome when business becomes more active.

Buyers are still shopping over the market and playing one offer against another in order to get prices down, even when buying only fery small quantities. Many dealers showed a willingness to shade prices on firm bids and most of the sales last week were at prices considerably lower than the mills were willing to accept.

Many factors on this market believe that continued curtailment will do more to remedy the present situation than anything else. If present cotton prices can hold without a material decline, it is believed here that many yarn buyers will come into the market for additional supplies within the next several weeks.

Yarn prices in this market were quoted as follows, although these figures are in most instances below mill quotations:

Two-Ply Chain Warps.

2-ply 8s	42 a--	2-ply 24s	48½a49½
10s	43 a44	2-ply 26s	50½a51
12 to 14s	44 a45	2-ply 30s	52 a--
2-ply 16s	46 a--	2-ply 40s	61 a--
2-ply 20s	46½a47	2-ply 50s	72 a--

Two-Ply Skeins.

8s	42 a--	40s	59 a--
10s to 12s	42½a43½	40s ex.	64 a65
14s	44 a--	50s	72 a--
16s	45 a46	60s	80 a81
20s	46 a--	Tinged Carpet—	
24s	48 a48½	3, 4-ply	38 a--
26s	49½a50	White Carpet—	
30s	51 a51½	3, 4-ply	41 a--

Duck Yarns.

3, 4 and 5-ply—		3, 4 and 5-ply—	
8s	41 a42	16s	45½a46
10s	42½a43	20s	46 a46½
12s	43½a44		

Single Chain Warps.

10s	43 a--	24s	48 a--
12s	44 a--	26s	50 a--
14s	44½a--	30s	52 a53
16s	45 a--	40s	61 a--
20s	46 a--		

Single Skeins.

10s	42 a--	24s	48 a--
6s to 8s	41½a--	20s	45½a46
12s	43 a--	26s	49½a
14s	43½a--	30s	51 a52
16s	44 a--		

Frame Cones.

8s	41 a--	22s	45½a46
10s	41½a--	24s	46½a--
12s	42 a--	26s	47 a--
14s	42½a43	28s	48 a--
16s	43½a44	30s	50 a51
18s	44½a--	30s ty'g in	48 a49
20s	45 a--	40s	58½a59½

Combed Peeler Skeins.

2-ply 16s	60 a--	2-ply 50s	78 a--
2-ply 20s	63 a--	2-ply 60s	80 a83
2-ply 30s	66 a--	2-ply 70s	98 a--
2-ply 36s	68 a--	2-ply 80s	1 12a--
2-ply 40s	70 a72		

Combed Peeler Cones.

10s	50 a51	30s	63 a65
12s	51 a52	32s	63 a65
14s	52 a53	34s	65 a67
16s	53 a54	36s	70 a71
18s	54 a55	38s	70½a71½
20s	55 a--	40s	71 a72
22s	55 a56	50s	78 a80
24s	56 a56½	60s	85 a--
26s	56½a57	70s	1 00a--
28s	57 a58	80s	1 10a--

Carded Peeler Thread Twist Skeins.

20s, 2-ply	54 a--	36s, 2-ply	64 a--
22s, 2-ply	55 a--	40s, 2-ply	68 a--
24s, 2-ply	57 a--	45s, 2-ply	73 a--
30s, 2-ply	59 a--	50s, 2-ply	78 a--

Carded Cones.

10s	46 a--	22s	52 a--
12s	47 a--	26s	55 a--
14s	48 a--	28s	56 a--
20s	51 a--	30s	58 a--

Marked Improvement in Irish Linen Industry.

Conditions in the linen market have steadily improved during the past few months. Practically every line is enjoying increased order, and many mills, especially those producing dress linens, are booked for capacity for months ahead. The result is that prices for finished goods are rising. As a natural consequence of increased demand, raw flax prices have been affected, and since the supply is limited, it is entirely probable that the industry will be compelled to measure its output by the amount of flax available. Irish flax has registered a 50 per cent increase in price since the first of the year, and all indications point to still higher prices, says Consul Henry P. Starrett, Belfast.

Silk Improvement in Canton.

The provincial government of Kwangtung Province has authorized the organization of a bureau for assisting the people in the improvement of the provincial sericulture, Trade Commissioner G. C. Howard reports to the Department of Commerce. The bureau, which is closely affiliated with the Lingnaam Agricultural College, has power to supervise all the work of certified egg production in the province, even to the point of licensing egg merchants. It is supported by appropriations from the provincial government, and has as advisers a board com? posed of representatives from the government, the college, and several organizations of business men who are interested in the silk industry.

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Address Box 577, McComb, Miss.

Cotton Mill Executive, with 25 years' experience, 42 years of age, married, American, native of North Carolina, now employed, thoroughly understand the mill business, desires to connect with a good mill as manager or superintendent. Can furnish the best of reference as to character and ability. Address Box 74, care Southern Textile Bulletin.

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100 gangs No. 50 Universal cone winders.
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as to whereabouts of Mr. L. A. (Luther) Saunders. Please write Box J. M. S., care Southern Textile Bulletin.

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Experienced man on new unit consisting of 2 Whitin roller cards, 2 Pease spinning frames, 1 twister and rope unit.

Must know how to keep up machinery and get maximum production of mop yarns, rope, etc., from waste and low grade cotton. State fully your experience, references, age, salary expected and when you can come.

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Position as overseer weaving or designer. Thoroughly practical and good technical education. Have handled all grades of fancy dress goods, shirtings, etc. Both Dobby and Jacquard weaves. Good references and can come on short notice. Box No. 22-A, care Textile Bulletin.

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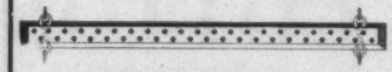

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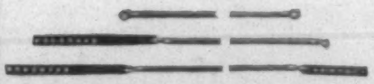

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EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is $2.00, which will also cover the cost of carrying a small advertisement for one month.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only $1.00.

During the three months' membership we send the applicant notices of all vacancies in the position which he desires.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern textile industry.

WANT position as superintendent or will take place as overseer, carding spinning or weaving, prefer weaving. Now employed in good North Carolina mill, but wish to change for better place. Best of references. No. 4135.

WANT position as overseer carding in good sized room. Prefer Georgia or Alabama. Eighteen years as overseer in good mills. Now overseer in large mill but have good reasons for wishing to change Age 48, have family, have good textile education and can run the job. No. 4136.

OVERSEER carding, now employed, wishes to make change. My experience and training fit me to handle large job in good mill. Good manager of help, first-class references as to character and ability. No. 4137.

WANT position as superintendent yarn mill of 10,000 to 15,000 spindles. Age 46, married, long practical experience, 12 years as superintendent. Now employed but have good reasons for making change. References. No. 4138.

WANT position as slasher tender or second hand in spinning. Well qualified for either place. Best of references. No. 4139.

WANT position as roller coverer. Am expert in roller covering and can demonstrate my ability in short time. Now employed in good mill. Want to correspond with mill needing man of unusual ability. No. 4140.

WANT position as overseer of carding. Long experience in handling a combination of both rooms and can get excellent results. Good references. No. 4148.

WANT position as electrician with good mill or some other manufacturing plant Have had 15 years' experience. Can furnish excellent references. No. 4149.

WANT position as superintendent, or would accept place as carder or spinner. Practical man of long experience as both superintendent and overseer. Best of references. No. 4150.

WANT position as overseer carding or spinning, or master mechanic and electrician. Employed at present but have good reasons for making a change. Can come on ten days' notice. First-class references. No. 4151.

WANT position as overseer carding and spinning. Am 44 years old and have had 20 years' experience as overseer and assistant superintendent. Can furnish best of references. No 4152.

WANT position as overseer plain weaving or overseer cloth room. Have had more than 25 years' experience on practically all kinds of goods. Am qualified to handle either position. Age 46, have family. Best of references. No. 4153.

WANT position as overseer spinning. Have had long experience in the spinning room and have taken a course with the I. C. S. Good references. No. 4154.

WANT position as overseer of slasher department. Age 32, eight years' experience as slasher and beamer. Good references. No. 4154.

WANT position as overseer weaving. Long experience on wide variety of fabrics and am capable man in every respect. Good references from past and present employers. No. 4156.

WANT position as superintendent of tire yarn or fabric plant, or fine combed yarn mill. Now located in East, but have had 6 years' experience in South. Long term of services superintendent and overseer and am reliable man who can get excellent results. Excellent references. No. 4157.

WANT position as overseer cloth room. Long experience on lawns and sheetings and can guarantee satisfaction. Good references. No. 4158.

WANT position as overseer of small card room or second hand in large room. Am also excellent card grinder. Long experience in good mill. A-1 references. No. 4159.

WANT position as superintendent. Have had 18 years as such and am now employed in my 19th year. Can handle yarn or cloth mill and am high class, practical man. No. 4160.

WANT position as overseer carding or spinning, or both. Past experience and training fits me to handle job in efficient manner. Good references. No. 4161.

WANT position as overseer spinning, or overseer weaving. Long experience in good mills in both departments. Reliable, steady man of good habits. Excellent references. No 4162.

WANT position as master mechanic. Now employed. Experienced in both steam and electric plants and can handle work in satisfactory manner. Good references. No. 4163.

WANT position as overseer spinning. experienced for many years on both carded and fine combed yarns. Would like to correspond with mill needing high-class man. Excellent references. No. 4164.

WANT position as overseer weaving. Experienced on many different fabrics and am competent and reliable. No. 4165.

WANT position as superintendent. Fitted by training and experience to handle large mill in satisfactory manner. Good references. No. 4166.

WANT position as superintendent; yarn mill preferred. Now superintendent of good yarn mill and have held job for over two years. Giving entire satisfaction. Thoroughly understand carding and spinning. 15 years as superintendent and overseer. Good references. No. 4167.

WANT position as superintendent of cloth mill. Long experience and can give references from many mill executives to show excellent record of past service. No. 4168.

WANT position as superintendent of yarn or cloth mill. Now employed as night superintendent but wish day job. References to show ability character and past record. No. 4169.

WANT position as superintendent or will take overseer's place in any department. Thoroughly qualified to handle any room in the mill. Best of references. No. 4170.

WANT position as superintendent or carder and spinner. Will go anywhere. Prefer yarn mill of 5,000 to 30,000 spindles. Can come at once. Best of references. No. 4176.

WANT position as carder or spinner. Ten years' experience in carding, spinning and winding. Now employed, but will change on short notice. Age 37, with family. References from present and past employers. No. 4172.

WANT position as superintendent. Practical man, good pusher, can get quality production on all classes of yarns. Good references. No. 4173.

WANT position as overseer spinning. Practical man of long experience on practically all yarn counts made in South. Good references. No. 4174.

WANT position as overseer spinning. Have had 20 years' experience in spinning, spooling and warping in some of best mills in South, and West, both white and colored work. Age 36, married, sober now employed as overseer. Good references. No. 4175.

WANT position as superintendent or would take overseer of carding and spinning. Many years' experience as superintendent and overseer and am well qualified in every respect. Best of references. No. 4171.

SUPERINTENDENT or carder and spinner desires position. Would take place as night superintendent in large mill. Prefer mill on plain work. Satisfactory references. No. 4177

WANT position as superintendent of mill or plain weaving or hosiery yarn. Am now 32 years of age and can give good references. Now employed as superintendent. No. 4178.

WANT position as superintendent or assistant superintendent in medium size mill. Would consider weave room in large mill. Best of references. No. 4179.

WANT position as spinner. Age 48. Have had 20 years' experience and can give excellent references. No. 4180.

WANT position as superintendent of finishing in yarn plant. Long experience in large Eastern mill and have excellent record of service. Fine references. No. 4181.

WANT position as carder or spinner, or box comber. Am specialist in combed yarn work and have had a long term of satisfactory service. Excellent references. No. 4182.

WANT position as shipping clerk. Four years' experience and can handle big job Now employed as shipping clerk. Gilt-edged references. No. 4183.

WANT position as carder and spinner. Now employed as such, but wish a larger place. Experienced, practical and reliable man. No. 4184.

WANT position as overseer finishing department, white or colored goods. Have had 16 years' experience in cloth room, 12 years as overseer on white and colored goods, wet and dry finish. Best of references. No. 4185.

WANT position as overseer spinning. Have had 12 years' experience as overseer and can furnish best of references. No. 4186.

WANT position as overseer weaving. Can handle either plain or fancy work both colored and white. Now employed. First-class references. No. 4187.

WANT position as superintendent, carder, spinner or carder and spinner. Have acceptably filled overseer's position for long term of years. Best of references. No. 4188.

WANT position as master mechanic and engineer. Experienced and skilled mechanic of long experience. Best of references. No. 4189.

WANT position as overseer spinning. 12 years as overseer and 5 years as overhauler in spinning and twisting. Good references. Address No. 4190.

WANT position as superintendent, or overseer weaving or designer. Have specialized in fancy weaving and designing and can show samples that have proved business getting. Long record of satisfactory service in fine weaving plants. Good references. No. 4192.

WANT position as superintendent of small yarn mill or carder and spinner in larger mill. Have had 20 years as overseer. Good references. No. 4191.

WANT position as superintendent or carder and spinner. Now employed but want better job. First-class references. No. 4193.

WANT position as superintendent. Prefer weaving mill. Practical man of long experience on great variety of fabrics. Good references No. 4194.

WANT position as overseer carding anywhere in South. Long experience and also graduate of I. C. S. Good references. No. 4197.

WANT position as overseer spinning, twisting or winding at not less than $40 weekly. Have had 25 years in the mill. 10 years as overseer, have run present room 3 years. Good references. No. 4195.

WANT position as overseer weaving. My experience has been as overseer in a number of large weave rooms and many kinds of goods. Excellent references. No. 4196.

WANT position as overseer of small weave room on plain goods. Am hustler for quality production and good manager of help. Good references. No. 4198.

WANT position as carder or spinner or superintendent. Now employed. Many years as both superintendent and overseer and am competent worker. Good references. No. 4199.

WANT position as carder. Have had 7 years as overseer and can give first-class references. No. 4200.

WANT position as superintendent of yarn or weave mill, or overseer weaving. Long experience in carding, spinning and weaving and winding and can give good references. No. 4201.

WANT position as superintendent of yarn mill. Prefer plant on tire fabrics. Experienced man of good habits and character and can give good references. No. 4202.

WANT position as overseer weaving on any kind of plain work; 12 years as overseer and have always been able to get the goods. Now employed but have good reasons for changing. Good references. No. 4203.

WANT position as spinner. Have held present job for over 6 years and made good record. Can get quality production at right price. Good references No. 4203.

WANT position as carder or carder and spinner. Am hustler for production and quality and know how to keep costs down. No. 4204.

WANT position as superintendent of yarn mill. Have had 12 years' experience. Have finished course in grading and stapling cotton. Know mill business thoroughly. Best of references as to character and ability. No. 4206.

WANT position as carder in small mill or second hand in large mill. At present employed by good mill but desire to change. Good references as to character and ability. No. 4207.

WANT position as carder. Thoroughly understand the carding process and have long term of experience in good mill. Best of references. No. 4208.

WANT position as superintendent. Experienced and reliable man who can get results. Experience gained in some of the best mills in the Carolinas. Excellent references. No. 4209.

WANT position as superintendent. Am competent executive and good manager of help, experienced in all departments of mill and man of good character and habits. Best of references. No. 4210.

WANT position as superintendent of medium sized yarn mill or assistant superintendent in large mill Prefer mill in Georgia, Alabama or Missippi. Long experience as overseer spinning. Have held present place as assistant superintendent for many years, making 4s to 40s single and ply cones, tubes, skeins and warps. References. No. 4111.

WANT position as superintendent or overseer carding and spinning. Am 41 years old, have had 20 years' experience as overseer and superintendent of mills in Georgia. Can give good references as to character and ability and can come at once. Good manager of help. No. 4113.

MASTER mechanic and chief engineer of extraordinary ability will consider proposition by March first. Fine machinist and mechanical engineer. Correspondence strictly confidential. No 4114.

WANT position as superintendent of yarn mill, or would accept place as carder and spinner. Practical man of long experience who can get results and who can successfully manage help. References. No. 4423.

WANT position as overseer carding. Qualied by experience and training to handle card room in thoroughly practical and up-to-date manner. Good references. No. 4224.

WANT rposition as superintendent o overseer large weve room. Now employed as superintendent but would like better job. Have long record of successful service and references to show it. No. 4225.

WANT position as overseer weave room or cloth room. Now employed, but wish larger job. Experienced on many lines of goods, competent and reliable. References to show character and ability. No. 4226.

WANT position as assistant superintendent. Age 25, graduate of well-known textile school, three years' experience in all departments of mill, two years as manager of testing laboratory in large mill. Excellent reference. No. 4227.

WANT position as overseer weaving. My experience covers a long term of years in a number of first-class mills, making a wide variety of goods. Excellent references. No. 4228.

WANT position as carder and spinner, either or both. Age 35, have family. Experienced man who can give as reference some of the best mills in the South. No. 4231.

WANT position as overseer of weaving or superintendent of plain weaving mill. Long experience as both superintendent and overseer and can get excellent results. No. 4333.

WANT position as overseer carding. Now employed as night carder, but wish day job. Have had 20 years' experience in carding, spinning, spooling and warping, both white and colored work. Can furnish good references. No. 4234.

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FLYERS—
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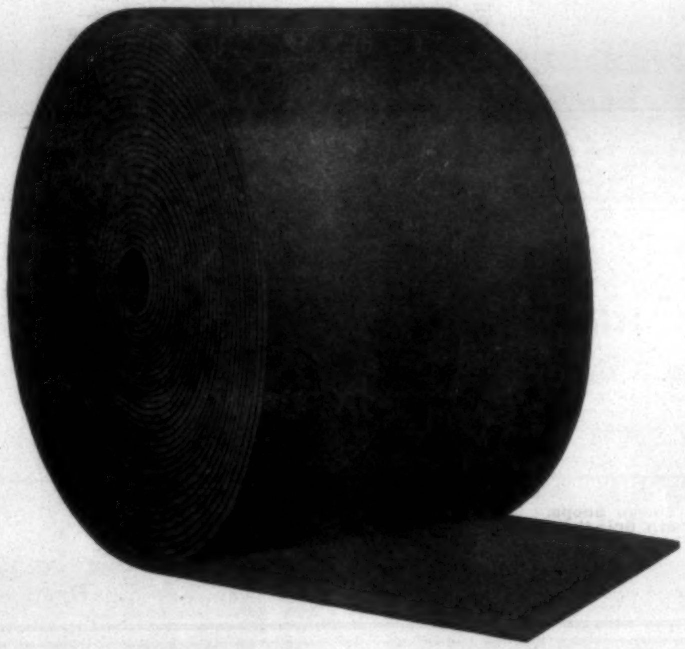

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YARN PRESSES—
- Economy Baler Co.

YARN TESTING MACHINES—
- H. L. Scott & Co.

Cocker Machine and Foundry Company
Gastonia, N. C.
BUILDERS OF TEXTILE MACHINERY
Linking Warpers, Linkers, Balling Warpers, Balling Attachments, Section Beam Warpers, Long Chain Beamers, Short Chain Beamers, Warp Splitting Machines, Warp Dyeing Machines, Warp Doublers and Splitters, Warp Coilers, Boiling Out Boxes and Warp Washing Machines, Dye House Ballers.

OUR SPINNING RINGS---SINGLE OR DOUBLE FLANGE
Start Easiest, Run Smoothest, Wear Longest!
PAWTUCKET SPINNING RING CO.
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NORWOOD
Mechanical Filtration
Gravity or Pressure Types
Clean, Clear Water Guaranteed
Norwood Engineering Co.
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Ashworth Brothers, Inc.
Tempered and Side Ground Card Clothing
TOPS RECLOTHED LICKERINS REWOUND COTTON MILL MACHINERY REPAIRED
For Prompt Service send your Top Flats to be reclothed and your Lickerins to be rewound to our nearest factory. We use our own special point hardened lickerin wire.
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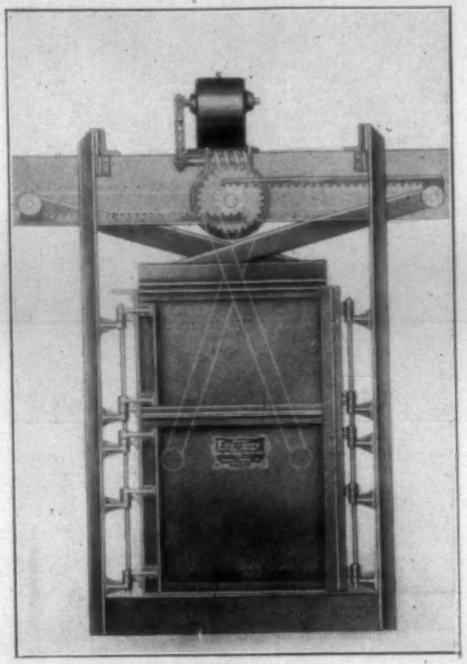
ALL STEEL ECONOMY FIRE PROOF

YARN PRESS

Direct Motor Connected——Completely Inclosed Chambers

"JUST WHAT EVERY YARN MILL NEEDS"



This Economy yarn baling press is unquestionably the last word in baling press development.

Chamber completely inclosed—no openings. The chamber is made up of four sets of doors, so that the ends of the chamber open as well as the sides. The four doors, however, lock at two corners by a very simple locking device.

This new yarn press produces a bale 36" long by 24 wide, of 12 to 15 cubic feet, weighing about four hundred pounds and over, making it possible to produce bales 24 to 36 inches deep, weighing from two hundred and fifty to four hundred pounds and over. Chamber five feet deep. Equipped with a directly connected electric motor capable of pulling up to 10 horse torque, alternating current 2 or 3 phase, 50 or 60 cycle, 220 or 550 volt.

The end doors as well as the sides, swing out independently, leaving all four sides of the bale exposed.

We should like very much indeed to confer with you regarding this Economy yarn press, and assure you that you would receive satisfactory service. The users of press are well satisfied with this yarn press, because it is convenient to load with great pressure and rapid in operation. Very substantially constructed.

ECONOMY BALER CO.

Dept. S. T.
Ann Arbor, Mich.

Why pay a high price for the latest and best type of machinery built and then handicap its output by belting it up with cheap belting? Why not pay just a little more and get the best? It is worth what you pay for it—and more. Production on your machinery counts.

Clean Quality
Trouble Free

Charlotte Leather Belting Company
Charlotte, North Carolina

Hollingsworth on Wheels For Lickerins

My unsurpassed service in rewinding Lickerins has pleased the largest and most exacting mills. You are due yourself an investigation.

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Specify "UCP" on your Requisitions

These Products are the Reliable Standards of Uniformity Demanded by the Leading Textile Mills

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Metallic Drawing Roll

Over the leather system before placing orders for new machinery, or if contemplating an increase in production, have them applied to their old machiner production, have them applied to their old machinery. It is applied successfully to the following room machinery:

Railways **Detaching Roll for Combers**
Sliver Lap Machines **Drawing Frames**
Ribbon Lap Machines **Slubbers**
Comber Draw Boxes **Intermediate Frames**

25 TO 33 PER CENT. MORE PRODUCTION GUARANTEED

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Indian Orchard, Mass.

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FOR WIDE SHEETINGS

The Stafford broad loom is built to withstand severe service. Its simplicity, accessibility of parts, and ease of operation are a few reasons why it is used by some of the most representative wide goods mills.

This loom embodies the high weaving qualities that characterize other Stafford looms, and can now be supplied with either shuttle or bobbin changing automatic features.

STAFFORD

THE STAFFORD COMPANY
WEAVING MACHINERY
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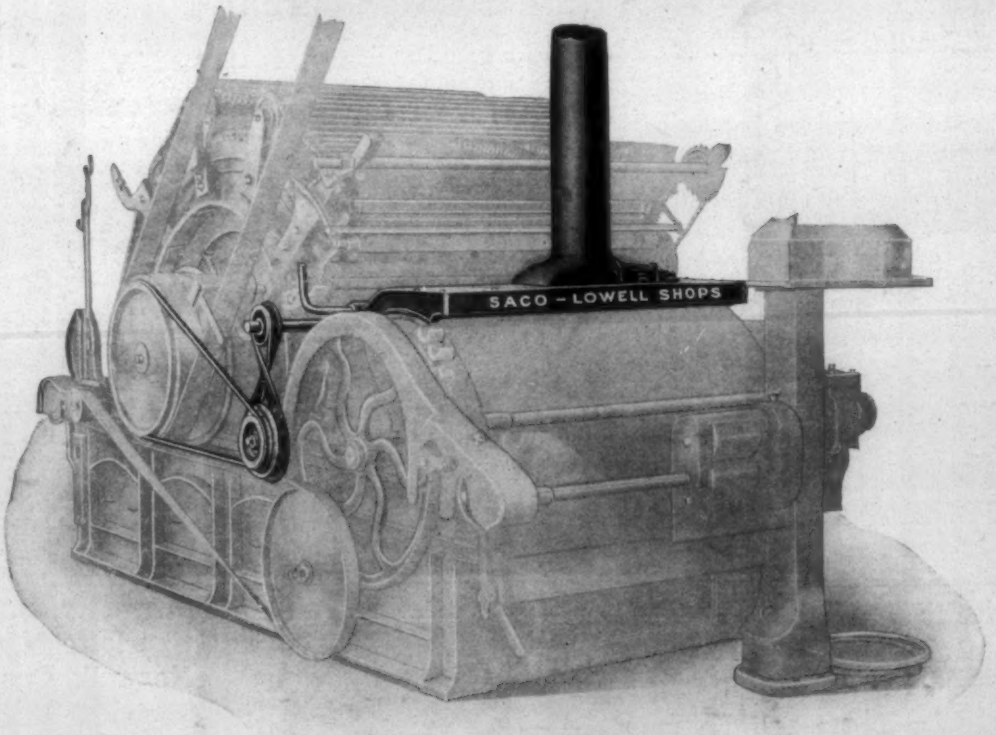
SACO-LOWELL SERVICE

Labor Saving Equipment for Cotton Spinning Mills

SACO-LOWELL CARD STRIPPER



$1,800 Annually Saved in Labor by $5,000 Investment

Actual figures showing the saving made by Saco-Lowell Card Stripper in a mill that has sixty revolving flat cards.

Without Saco-Lowell Stripper	
4 Tenders @ $1,040.00	$4,160
2 Strippers @ 910.00	1,820
Total	$5,980
With Saco-Lowell Stripper	
4 Tenders @ $1,040.00	$4,160
Total	$4,160

Saving—$1,820.00

Strips conveyed to Picker Room or Waste House, cleaned, uninjured, easily reworked or sold. No dust in stripping. Time required to strip 60 cards, 20 minutes.

SACO-LOWELL SHOPS

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